

# Advanced Glucose Monitors (AGM) in the Home Care Setting



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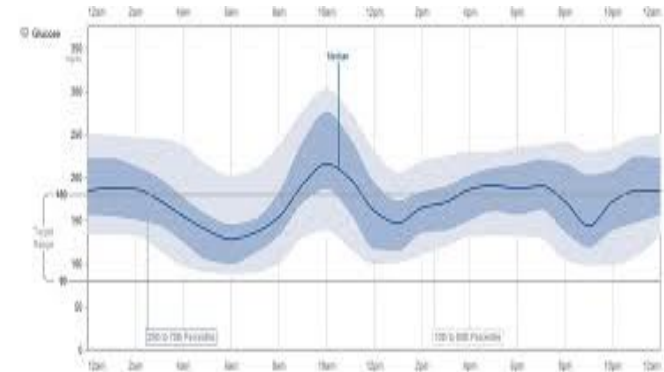
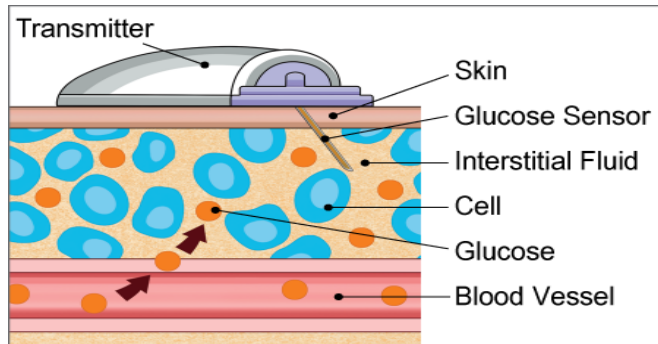
August 11, 2025

# Learning Objectives

- Awareness of the Advanced Glucose Monitors (AGM) in the Home Care Setting Clinical Guideline
- Identify AGM types approved in in Manitoba
- Insertion and removal instructions for each type of device:
  - FreeStyle Libre and Libre 2
  - Dexcom G6
  - Dexcom G7

# Terminology

**Continuous Glucose Monitoring** – allows clients to see glucose readings 24 hours a day using a small wearable device that measures interstitial glucose (glucose that has left the blood and moved into tissue). A glucose sensor or small electrode is inserted under the skin and measures interstitial glucose levels.



**Interstitial Fluid Glucose Monitoring** – Measuring of blood glucose in the interstitial fluid (versus directly in the blood). Interstitial glucose readings are behind blood glucose levels by about 4-5 minutes.

**Flash Glucose Monitor** – Device that has no transmitter piece. The user manually scans the sensor with a handheld reader or app on a phone to see the current and stored glucose results.



**Continuous Glucose Monitor** – Device that has a transmitter attached to a sensor sending glucose readings to an app on a smart phone, hand held receiver or integrated insulin pump.

# Clinical Guideline: AGM in the Home Care setting



- Shared Health Clinical Guideline includes:
  - Home Care: Advanced Glucose Monitors (AGM) in the Home Care Setting
  - Resource documents:
    - Vendor Specific Instructions / Resources to support Advanced Glucose Monitors in the Home Care Setting
    - Advanced Glucose Monitors in the Home Care Setting – Health Care Provider – Frequently Asked Questions
- Provide guidance, information and a standardized process for health care professionals to support eligible clients in the Home Care (HC) setting with the use of AGMs.
- Establish evidence-based care standards for the use of AGM devices in HC across all the Health Authorities in Manitoba.

- Eligibility
  1. Eligible for HC Services in Manitoba
  2. Requires assistance with the application of the AGM due to mobility or dexterity concerns and when all other formal/informal support options have been exhausted (i.e. family/support networks, local pharmacy).
  3. Uses a safety engineered AGM approved by the Manitoba Pharmacare Program.
- An order from the Most Responsible Provider is required to use the AGM device for glucose monitoring in the HC setting.
- The HC Coordinator or designate will review the request, client eligibility and develop an individualized client care plan if eligible.

# Important Things to Consider When Using AGM's



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- Blood Glucose Monitoring is used to complement the AGM device. In the event that a client is showing signs of hypoglycemia or hyperglycemia or the AGM reading is HIGH or LOW, testing for Capillary Blood Glucose with a Blood Glucose Monitor is required.
- The AGM results can be used to make any treatment decisions and medication adjustments for clients who are feeling well and are not experiencing a glycemic event at the time of their visit.
- The AGM must be removed prior to an procedure that involves strong magnetic fields or electromagnetic radiation (i.e. MRI, CT Scan, PET-CT Scan) or diathermy (high frequency electrical heat).
- The client/caregiver is responsible for:
  - supplying replacement AGM devices and supplies,
  - having a Blood Glucose Monitor and required supplies.

## AGM's improve client outcomes related to diabetes management

- Provides an alternative option when clients are unable/unwilling to complete routine and repeated blood glucose testing (finger pokes).
- Enhances consistency and provides timely information (on demand and 24 hour surveillance) available to client and health care team in relation to glucose monitoring and management.
- Results in lower HbA1C and reduced hypoglycemic episodes.
- Encourages client to stay involved and engaged in managing their diabetes.
- Improves the ability of the client to manage their chronic illness at home and avoid acute care admissions.

# AGM Devices supported in Home Care

- Only Safety Engineered AGM devices approved by the Manitoba Pharmacare Program are supported by Home Care.
- Four (4) AGM devices currently approved through the Manitoba Pharmacare Program that will be supported in Home Care:

**Abbot's FreeStyle Libre** and **FreeStyle Libre 2 (Flash)** – insertion needle remains inside applicator.

**Dexcom G6** and **G7 (CGM)** – insertion needle remains inside the applicator.

All are **Safety Engineered Devices** – needles are either not accessible through the insertion process, or remain encased and then retract into the applicator post-insertion.

# Nursing Responsibilities

- Prior to your client assignment:
  - Review the Clinical Guideline and the applicable online learning for the applicable device prior to completing your client assignment..
  - Review the Health Care Provider – Frequently Asked Questions
  - Refer to Vendor Specific Instructions/Resources to support an Advanced Glucose Monitor in Home Care for links to applicable resources.
- Required documentation:
  - Document in the client record as per your regional processes.
  - Including: insertion, adjustments, replacement, glucose levels (AGM or Blood Glucose Monitors), client reported concerns and/or removal for imaging purposes.
- Reporting and follow-up:
  - Report concerns as per your regional processes.

- Some regions have additional available resources to support both clients and staff, enhancing care and service delivery.
- To identify the specific resources available in your region, please refer to Resource Section - Section 6 of the Clinical Guideline.

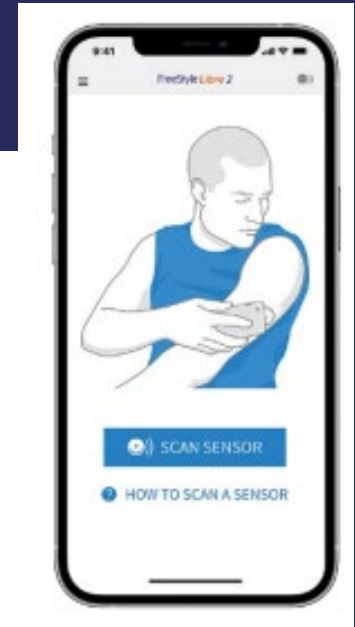
## 6.0. Resources

- 6.1. Vendor Specific Instructions/Resources to support Advanced Glucose Monitors in the Home Care Setting
- 6.2. Advanced Glucose Monitors in the Home Care Setting - Health Care Provider - Frequently Asked Questions
- 6.3. For Northern Health Region: **Regional Diabetes Program Referral Form - Form # NHR\_0659**
- 6.4. For Prairie Mountain Health: **Diabetes Teaching Manual** found on Prairie Mountain Health's SharePoint page.
- 6.5. For Winnipeg Regional Health Authority: [Diabetes Compendium - WRHA Insite](#)



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# FreeStyle Libre and Libre 2



# FreeStyle Libre & Libre 2 Systems

## *How it works*

**Measures Glucose:** From the interstitial fluid (ISF) (fluid surrounding body cells).

### Sensor Details:

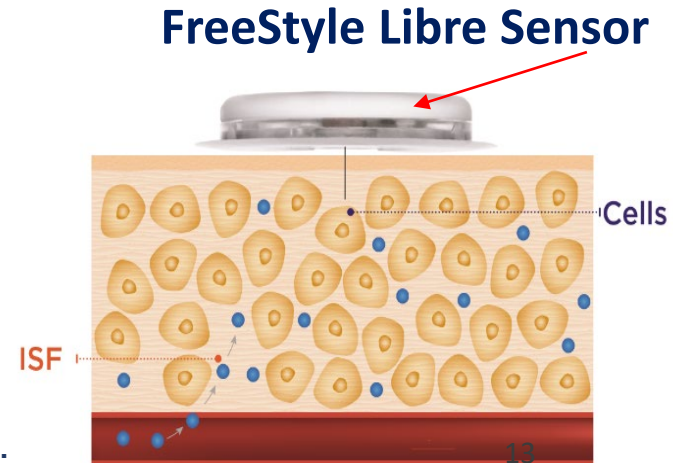
- **Filament:** 0.4mm wide, inserted ~5mm under the skin.
- **Location:** Floats in the interstitial fluid to measure glucose levels.

### Key Features:

- **1-Second Scan:** Instant glucose reading, trend arrow, and 8-hour history displayed.
- **Discreet & Comfortable:** Small, lightweight sensor worn for up to 14 days.
- **User-Friendly:** Simple, easy-to-read scan without the need for finger pricks.

### Indication:

- **For Adults:** 18 years and older with diabetes mellitus.



# FreeStyle Libre and Libre 2: *Similarities and Differences*



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## Glucose Detection:

- **Sensor Type:** Detects glucose levels from interstitial fluid (ISF) using **Flash Glucose Monitoring**.

## Communication:

- **Libre & Libre 2:** Both sensors communicate with the **FreeStyle Libre Reader**.
- **Libre 2:** Can also connect to the **FreeStyle Libre 2 App** on mobile devices.



## Additional Features (Libre 2):

- **Real-Time Glucose Alarms:**
  - Available through both the **FreeStyle Libre 2 Reader** and **Mobile App**.
  - Optional alerts for real-time glucose tracking.

# FreeStyle Libre and Libre 2 *Insertion Instructions*

1. Clean an area on the back of the upper arm with an alcohol wipe, avoiding scars, moles, stretch marks or lumps.
2. Allow the area to dry thoroughly.



# FreeStyle Libre and Libre 2 *Insertion Instructions*

3. Peel Open the lid on the sensor pack and unscrew the applicator.
4. Line up the dark marks on the sensor application and sensor pack.
5. On a hard flat surface press down firmly on the sensor applicator until it comes to a stop.
6. Lift sensor applicator out of the sensor pack.



# FreeStyle Libre and Libre 2 *Insertion Instructions*

7. Apply the sensor by placing the sensor applicator over the cleaned site and pushing down firmly.
8. Gently pull the sensor applicator away from your arm.
9. **Time to First Reading:** The sensor can be used to check glucose levels 1 hour after application.



# FreeStyle Libre and Libre 2

## *Tips and Tricks for Successful Application*



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**Wash:** Use non-moisturizing, fragrance-free soap to clean the area where you will apply the sensor.

**Clean:** Use alcohol wipes to remove any oil or residue from the skin.

**Dry:** Allow the skin to fully dry before applying the sensor.

**Extra Adhesion (Optional):** *Cavilon* is approved for use as a skin preparation to enhance adhesion.

**Approved Application Sites:** Apply the sensor only to approved application sites: back of the upper arms.

# FreeStyle Libre and Libre 2: *Sensor Removal Instructions*



## 1. Loosen Adhesive

- Gently rub the adhesive area around the plastic part of the sensor using a wipe or baby oil-soaked cotton ball.

## 2. Remove Sensor

- Lift the adhesive and carefully pull the sensor straight up and out.

## 3. Dispose Properly

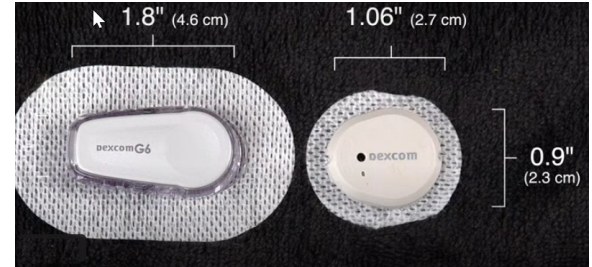
- Discard the sensor as a biohazard in an appropriate sharps disposal container.

# Dexcom G6 and G7 Similarities and Differences

- **Similarities**

- Real-time Continuous Glucose Monitoring (rtCGM) devices
- transmitter attached to a sensor sends glucose readings to a smartphone app or a hand held receiver.

- **Key differences**



Features	Dexcom G6	Dexcom G7
Size	Larger sensor (~ 60% bigger)	60% smaller than G6
Thickness	15 mm	4.7 mm (less than half the size)
Design	Separate sensor & transmitter	Combined sensor & transmitter

# Dexcom G6



# Dexcom G6

## Background Information



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### Sensor & Transmitter Details:

- Small sensor measures glucose levels in the interstitial fluid.
- A reusable transmitter (changed every 3 months) sends
- real-time readings to a mobile device or receiver.
- Sensor lifespan: Up to 10 days.



Transmitter



Applicator & Sensor

### Key Features:

- Data Transmission: Sends glucose data every 5 minutes.
- Adhesive Patch: Holds the sensor in place to ensure accurate readings.

### Indications:

- Typically for those with type 1 diabetes or insulin-treated type 2 diabetes.
- Approved for use in individuals aged 2 years and older.



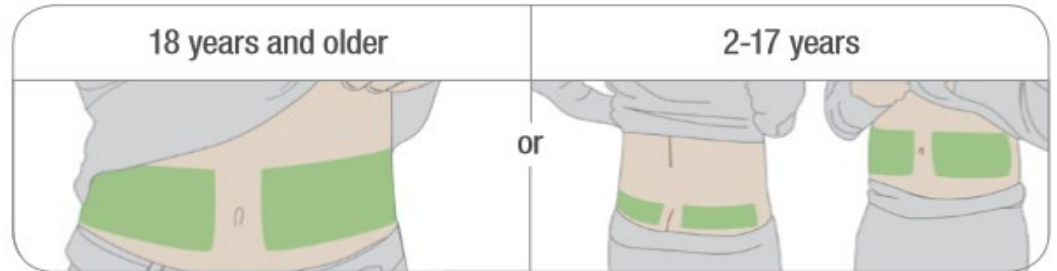
Display Device

# Dexcom G6

## Application Instructions - Sensor

### Insert the Sensor

1. Cue client to turn on receiver/smart device and enter the sensor code and serial number as prompted on the screen.
2. Once the client sees the 'Insert & Attached' screen on their device, you may proceed with the sensor insertion.
3. Gather supplies: the applicator, transmitter and wipes for cleaning.
4. Select the sensor site: choose a site about 3 inches from any insulin pumps, tattoos, irritated skin or scarring.



Avoid bones, irritated skin, tattoos, and areas that get bumped.

# Dexcom G6

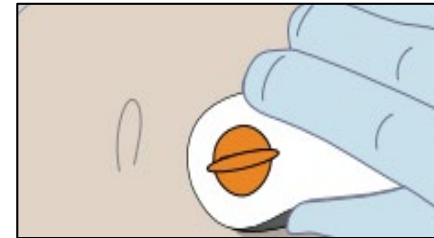
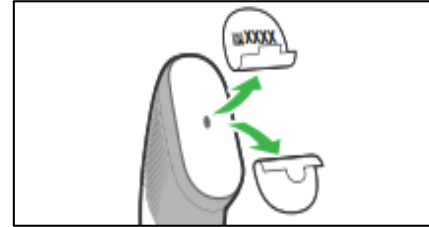
## Application Instructions - Sensor



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### Insert the Sensor

5. Wash and dry hands, clean sensor site with alcohol wipe, allow site to dry.
6. Peel off adhesive backings on applicator. **Do Not Touch** adhesive.
7. Place applicator on skin and remove orange safety guard.

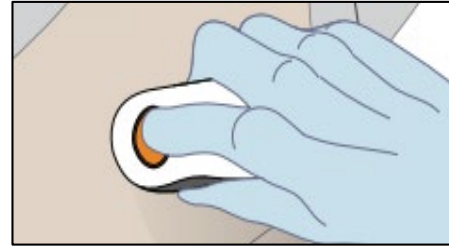


# Dexcom G6

## *Application Instructions - Sensor*

### Insert the Sensor

8. Press button to insert sensor.
9. Remove applicator from skin leaving patch and holder on in place.
10. Discard applicator (sharps container).



# Dexcom G6

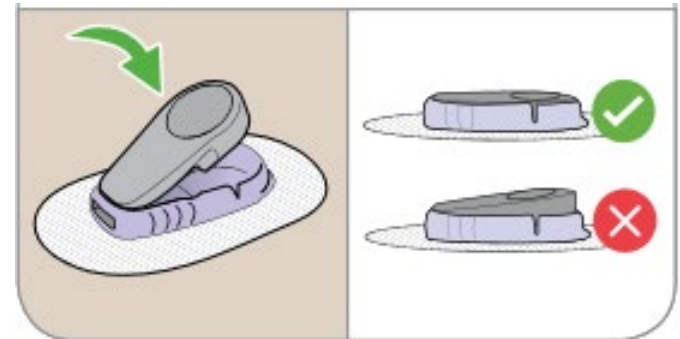
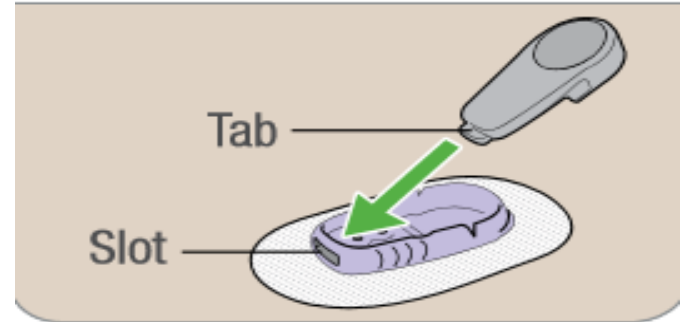
## Application Instructions - Transmitter



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### Attach the Transmitter

1. Take transmitter out of the box.
2. Clean transmitter with the alcohol wipe.
3. Insert transmitter, tab first into holder.
4. Snap transmitter. It clicks into place. Make sure it is flat and snug in holder.
5. Rub around the patch three times.



# Dexcom G6

## *Sensor and Transmitter Removal*



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### 1. Remove the Sensor:

- Grasp the edge of the adhesive patch and carefully lift both the adhesive and the sensor off the body/site

### 2. Remove the Transmitter:

- Detach the transmitter from the adhesive holder once the sensor is removed.

### 3. Save the Transmitter:

- Do NOT discard the transmitter. It will be used for the next 3 months.

### Important Notes:

- Do not use the same sensor site twice in a row to ensure effective sensor placement.
- The client must complete all pairing steps independently as instructed on their device.

# Dexcom G7



# Dexcom G7

## *Application Instructions*

1. Gather supplies
2. Choose Sensor Site:
  - Recommended locations:
    - The back of the upper arm
    - The abdomen (not indicated for pregnant women)
    - The upper buttocks (ages 2-6 years old only)
  - Sites to avoid:
    - Areas with insulin pumps, tattoos, irritated skin or scarring
    - Select a site about 3 inches away from these areas for best results.

# Dexcom G7

## Application Instructions

3. Unscrew the Cap:
  - Do not touch the inside of the applicator to maintain sterility.
4. Position the Applicator:
  - Press and hold the applicator firmly against the skin.
  - Ensure the clear safety guard is pushed in.
5. Activate the Sensor:
  - Press the button to insert the sensor.
6. Remove the Applicator:
  - Once the sensor is in place, carefully remove the applicator



# Dexcom G7

## *Application Instructions*



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7. Rub firmly around patch 3 times.



8. Gently press for 10 seconds



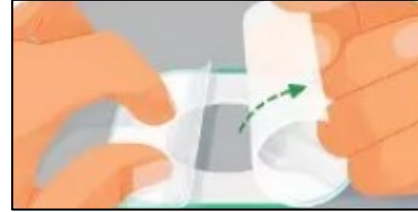
# Dexcom G7

## *Application Instructions*



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9. Carefully pull off both clear liners, one at a time – Don't touch white adhesive area.



10. Use coloured tab to place over around sensor.



11. Rub around overpatch



# Dexcom G7 Application

12. Use tab to peel of liner.



13. Rub around overpatch



# Dexcom G7

## *Sensor Removal Instructions*

- To remove sensor, peel off patch like a bandage.
- To make it easier try these tips:
  - Loosen edge and soak patch in body oil like baby oil or an adhesive remover for skin.
  - Use adhesive removal wipes for skin to rub the skin that gets exposed as you peel back the patch.
  - Pull off patch slowly, folding it over itself, in the same direction of hair growth.
  - Stretch loosened edge and push your fingers under the patch to pull it off the skin.

Clinical Communication: Home Care: Advanced Glucose Monitors in the Home Care Setting  
<https://healthproviders.sharedhealthmb.ca/files/cc-home-care-glucose-monitors.pdf>

Clinical Guideline 630.105.117 - Home Care - Advanced Glucose Monitors in Home Care Setting  
<https://healthproviders.sharedhealthmb.ca/files/home-care-glucose-monitors-faqs.pdf>

Vendor Specific Instructions / Resources to support Advanced Glucose Monitors in the Home Care Setting  
<https://healthproviders.sharedhealthmb.ca/files/home-care-glucose-monitors-vendor-instructions.pdf>

Advanced Glucose Monitors in the Home Care Setting: Health Care Provider – Frequently Asked Questions  
<https://healthproviders.sharedhealthmb.ca/files/home-care-glucose-monitors-faqs.pdf>



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