



**Connecticut Valley Hospital
Nursing Policy and Procedure**

**SECTION D: PSYCHOLOGICAL ADAPTATION
CHAPTER 15: EXAMINATION AND SPECIAL
TESTS**

**POLICY AND PROCEDURE 15.1 Bayer Contour
Blood Glucose Monitoring System**

Authorization:
Nursing Executive Committee

Date Effective: May 1, 2018
Scope: Registered Nurses and Licensed Practical Nurses

Standard of Practice:

The licensed nurse will accurately monitor the capillary blood glucose of specified diabetic patients.

The licensed nurse will teach the patient self-glucose monitoring based on an assessment of his/her capability.

Standard of Care:

The patient can expect his/her blood glucose level will be monitored accurately by a licensed nurse who is competent to perform the Bayer Contour procedure.

The patient can expect to learn self-glucose monitoring based on his/her capability.

Policy:

Bayer Contour is the Glucometer used to measure the amount of glucose present in capillary blood. The test strip is the Bayer Contour for hospital professionals.

Blood glucose levels of diabetic patients are monitored on a routine basis as specified by the physician.

A licensed nurse who is competent in the Bayer Contour procedure may perform the procedure without a physician's order when clinically indicated.

Procedure:

1. Read the User's Manual before using the Bayer Contour Blood Glucose Monitoring System.

Before testing:

1. Wash hands
2. Check the expiration date on the test strip package. ***Discard vial(s) if beyond expiration date.***
3. The Bayer Contour meter does not require coding.
4. Gather the following items:
 - a. Gloves
 - b. Vial of test strips
 - c. BD Microtainer contact activated Lancet
 - d. Alcohol wipes
 - e. Gauze square or cotton ball (to blot finger after testing)

A. Test Blood Glucose Level:

1. Perform glucose testing in the treatment room. It is also acceptable to do a finger stick at the patient's bedside. Glucose testing is not to be done in the medication room.
2. Perform hand hygiene and don gloves.
3. Press the M button on the meter .Meter is set to L-1. Do not set to advanced L-2 setting.
4. When the "test strip symbol" appears on the display, monitor is ready to accept a test strip;
5. Remove a test strip from the vial and immediately recap vial;
6. Insert the Bayer Contour test strip grey end facing up into the test strip guide – once the test strip is correctly inserted, a test strip symbol and a blood drop flashes on the display;
7. Apply gloves; use Standard Precautions;
8. Prick the finger and compress it if necessary to obtain enough blood for a sample. Place the small drop of blood against the tip of the Bayer Contour test strip. **Do not put blood on the top of the test strip or press the tip of the strip against skin as this could give an inaccurate reading.** The strip will automatically draw the blood into the grey target area.
9. When enough blood is applied to the test strip correctly the meter will beep,

measurement appears within 5 seconds. The result is automatically recorded in the monitor's memory.

10. If "HI" is displayed, the glucose result is higher than 600 mg/dl; if "LO" is displayed, the glucose result is less than 10 mg/dl. If these results contradict clinical assessment, perform a quality control check. If the quality control check is within acceptable range, repeat the blood glucose test. If the results are below 70 mg/dl, notify the physician immediately.
11. After the test, dispose of the lancet in the sharps container;
12. Remove the test strip and the gloves and dispose of them in the biohazards waste container.
13. Perform Hand Hygiene.
14. Document results on the Diabetic Treatment Record (CVH-169) and the Medication Administration Record. Record any abnormalities in the Integrated Progress Notes.
15. Notify clinician of blood glucose level if less than 70 or greater than 350, unless there is a Physician's Order which directs otherwise.
16. In addition, if the glucose level is less than 70, the nurse leaves a voice mail message to that effect on the Pharmacy ADR Hotline at ext. 2377 (ADRS).

B. Inspect Bayer Contour Test Strip

1. Check the expiration date on the test strip vial. *Discard entire vial(s) if beyond expiration date.*
2. Inspect a test strip. Insert a test strip with grey colored bars up and slide into the meter. The meter will turn on automatically.
3. The test strip symbol will appear briefly on the display.

C. Check Quality Control (O.C.)

1. When the Bayer Contour machine is in use, check the High, Low and Norm Quality Controls nightly on (3rd shift) and record results in the Bayer Contour Quality Control Testing Log (15.1a).
2. If there is no required use of the Bayer Contour, check the High, Low, and Norm Quality Controls weekly, each Saturday on the night shift. Note in the Quality Control Testing Log "No patient use" for each day the Bayer Contour is not utilized. Complete control testing prior to putting the device back in use, and daily thereafter, as long as it remains in use.
3. Division Nurse Supervisors will monitor compliance with quality control testing documentation in accordance with #1 and/or #2 above.

4. Send completed logs to supervisor's office at the end of each month.
5. Supervisor will keep completed logs for **two years**.
6. To do a glucose control check, the following items are needed:
 - ✓ Bayer Contour Control Solutions; Low, Norm and High
 - ✓ Bayer Contour Test Strips

After opening a new bottle of glucose control solution, write the date on the label. The solution will be good for 6 months after opening or until expiration date whichever comes first. **Note: the control solutions have different expiration dates.**

7. To proceed to Low Level Glucose Control, insert the Bayer Contour test strip grey target area facing up into the test strip slot.
8. **Do not apply control solution directly from the bottle to the strip.** Apply a tiny drop of solution on a non-absorbent surface (wax paper). Touch the tip of the test strip to the control solution. The strip will automatically draw the solution into the strip.
9. Control results will appear within 5 seconds.
10. Proceed to Normal and High Level Glucose Controls, insert a new Bayer Contour "test strip and return to steps 7- 9 and follow the same steps again.
The **bottom of the test strip box displays the ranges for the control solutions** The results on the meter should fall within the acceptable range. *The "V" on the display does not indicate the control test result is within the specified range. It only marks it as a control solution test. It will not be included in your averages.*
11. Document Low, Norm and High readings on the Bayer Contour Quality Control testing form (see attached).
12. If the result is outside the acceptable range:
 - ✓ Check the expiration date of the test strips and control solutions. If expired discard them.
 - ✓ Test strips and control solutions can be damaged when the container has not been recapped or stored properly.
Repeat the glucose control test with a new strip. If the result is still not within the acceptable range, do not use the monitor.
 - ✓ **Contact Bayer Diabetes Care Customer Service at 1-800-348-8100 (7 days a week, 24 hours a day) if you have an issue and none of the problem solving steps resolved the situation. CVH Central Supply also shall be contacted regarding any issues.**

D. Memory Function:

The Bayer Contour meter automatically stores 480 blood glucose results. The most recent to the oldest results can be reviewed. When the memory is full, the monitor deletes the oldest as a new result is added. To view the memory, press M, then press M again. The 14 day average will appear with the number of results shown at the top of the display. Control results will not be shown. Press ▼ button twice to view previous result. You can press ▼ or ▲ to scroll back or forward to view results. When END appears, all results have been viewed. To view control results, the data would have to be downloaded to a computer with the proper software installed.

E. Cleaning/Disinfecting Equipment

- Perform hand hygiene before handling the meter, then don gloves.
- Use PDI Super Sani-Cloth[®] Germicidal Disposable Wipes to wipe down Glucometer, then allow 2 minute wet time.
- Do not allow cleaning solution to run into the meter through areas such as around the buttons or the meter's test strip or data ports.
- This will be performed after each use of a glucometer.
- Disinfection will also be performed and documented each night on third shift along with the Quality Control check.
- If the meter is not used throughout the week, this will be performed every Saturday night on third shift after Quality Control check.

F. Battery Replacement:

The batteries are changed when a battery symbol displays on the screen. To replace the batteries:

1. Turn the monitor off.
2. Open the battery cover on the back of the machine pushing the tab in the direction indicated.
3. Remove the batteries.
4. Insert new batteries (3-volt (DL2032 or CR2032 lithium batteries) with the positive (+) side facing up. The battery rests on the contact. The door will hold down the battery. Replace the battery cover and snap it into place. You will hear an audible click. You will then have to reset the date and time only if changing the batteries takes more than 5 minutes. If batteries are replaced within 5 minutes, all settings and results are saved.

Re-ordering:

Re-order Bayer Contour Test Strips, Glucose Control Solution and batteries through CVH Central Supply.