Point of Care Testing: ACCU-CHEK® Inform II Glucose Meter

Why Training?

- The use of blood glucose meters by untrained staff, without adequate management supervision of the equipment and without the use of quality control procedures, can lead to misleading results, adversely affecting the treatment of patients"

- Newcomers must have competency assessed: initially at 6 months, 1 year and annually thereafter.

Accu-Chek Inform II

Accu-Chek Inform II

Base Unit (BU)

•Automatic data transfer and battery charge.
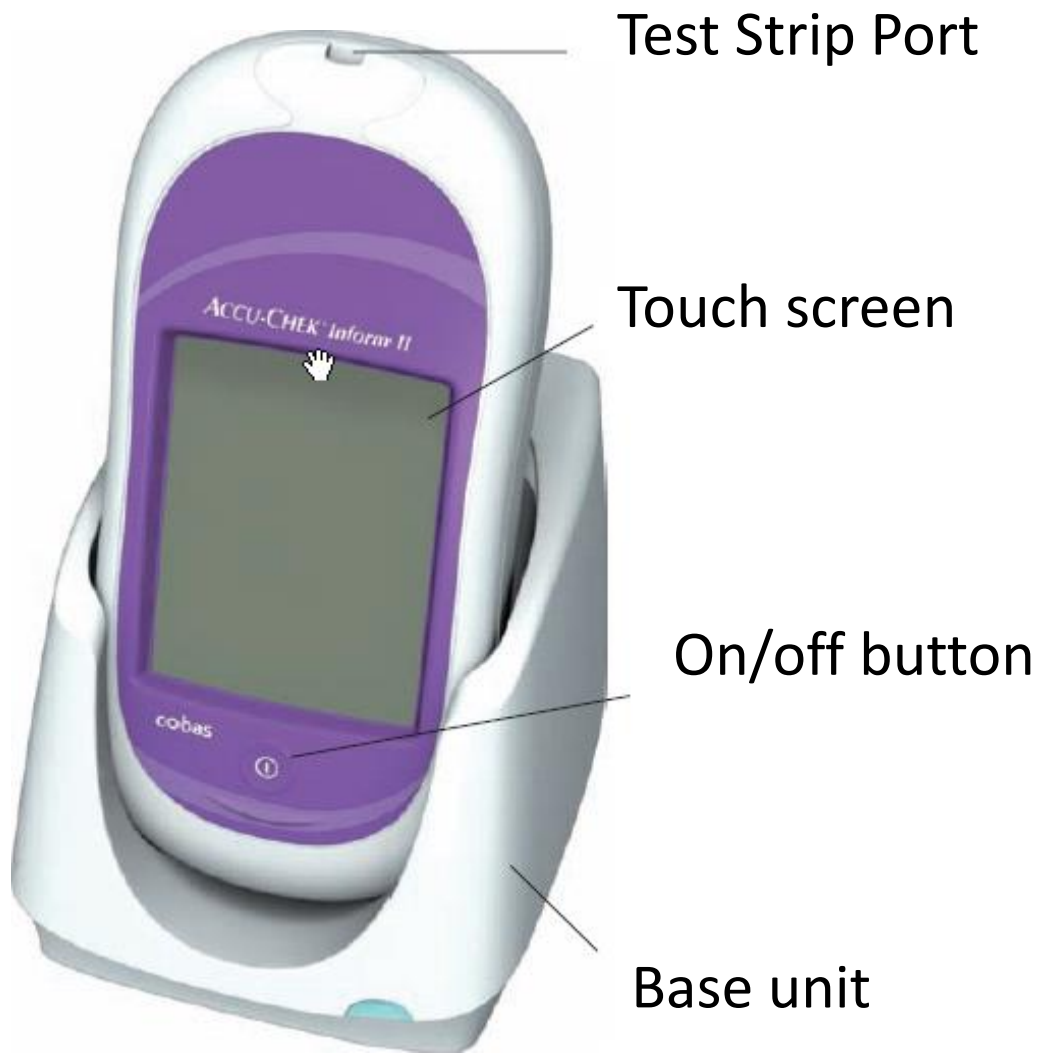
•Green light – standby

•Red light – data transfer

Tote Box

Meter, strips, Control 1 & 2, lancets

Accu-chek Inform II

Test Strip Port

Touch screen

FRONT VIEW

On/off button

Base unit

Accu-Chek Inform II

Test Strip Port

Touchscreen-
Main menu
with 3 options
(finger touch
only)

On/Off Button

Barcode Scanner (Laser)

- Operator ID

- Patient ID

- Control Solution 1 & 2

- Inform II strip vial

FRONT VIEW

Back View

Bar code scanner

Battery Pack

Infra-red window
for communication

Accu-Chek Inform II Strips

- **Code Key information loaded by POCC**

- Stored @ Room Temperature

- Test Strip Code, Quality Control Range, Expiration and Lot # Bar Code is on each vial

- Scan or verify lot number with each use

- Once opened initial and date

- Replace cap immediately after each use

- Expiration date on vial is valid for "open" or "closed" vial expiration date
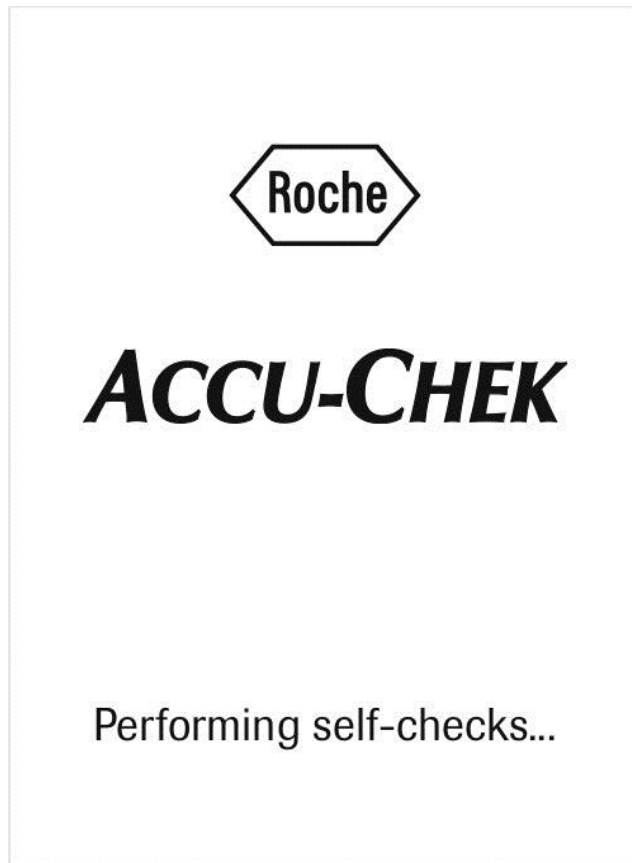
Accu-chek Inform II Stips

Golden End
(Electrodes)

Yellow
Window
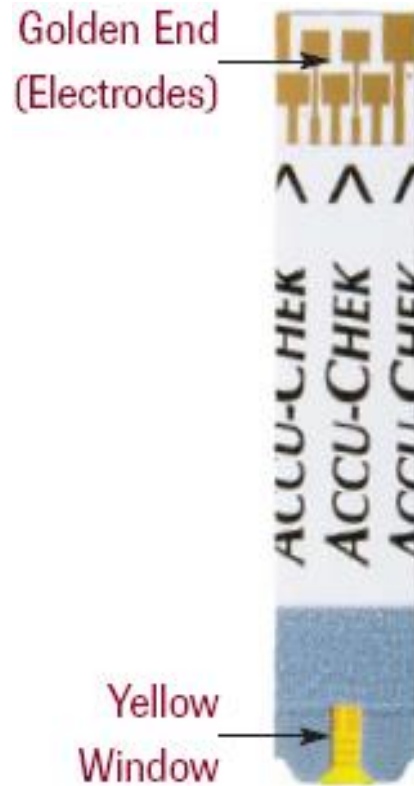
Sample volume detection

Robust End Dosing Strip

Fast 5 Second Result

0.6µL sample size

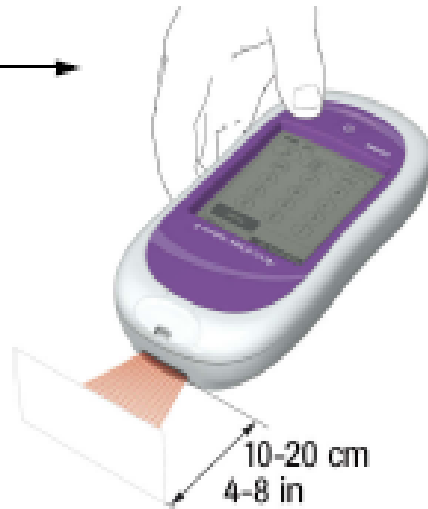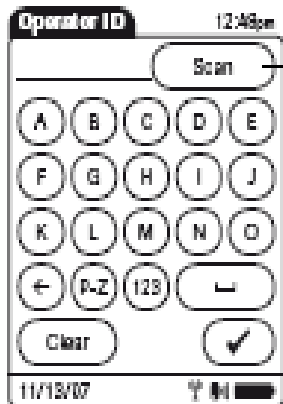# Power up screens

Step 1: Press and release the On/Off button . The system is now on.

Step 2: The Power Up screen appears.

Step 3: Scan operator ID. Operator ID is unique to user and needed for all activities

10-20 cm
4-8 in

*** Do not share your operator ID/badge with other staff!**

- **What is an Operator ID?**
  - Your DoD ID is your Operator ID and is used to identify you as the person performing a glucose test.

  - Scan the bar-code on the front of your badge.

  - If your ID comes up "Operator ID is invalid" try docking your meter and try again. If it still does not work, contact POCT Staff.

Scanning is everything

- Scanning prevents manual entry errors and results going to the wrong patient chart.

- If you must manually enter a number, double check it before you press the enter button. This should be a rare issue.
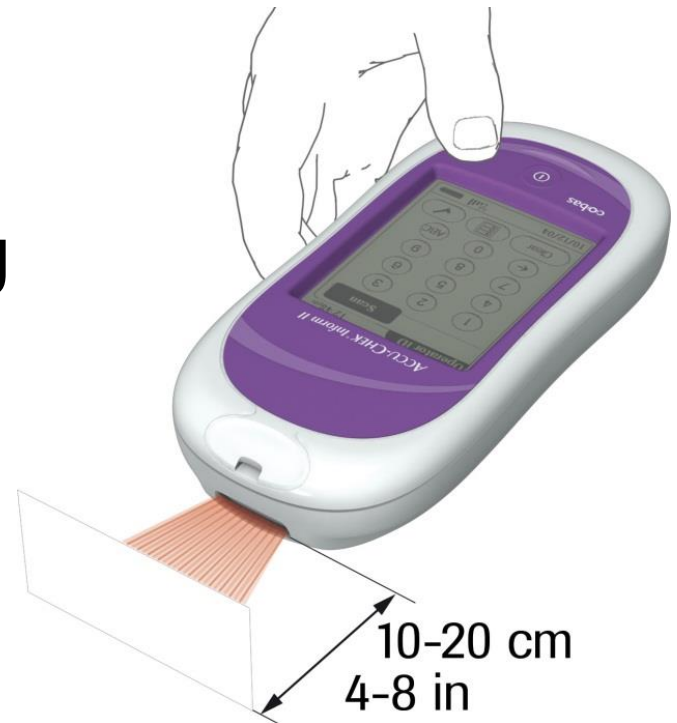
10-20 cm
4-8 in

Main Menu Screen

When opening a new box of ACCU-CHEK® Controls,

- record the open date and 3 month expiration date on the vial

- Circle the manufacturer's expiration date printed on the label, if less than 30 days.

- Prior to performing QC, check the expiration date on the control vials.

- Store glucose control solutions at room temperature (less than 90°F, 32°C). Do not freeze.

Must write date when opened and 3 months to Discard along with initials

- **Control testing must be performed at the following times:**
  – Every 8 hours/every shift, or meters will lock out patients testing.
  – When a new vial of test strips are opened
  – When a vial of strips has been left opened
  – If the meter has been dropped

Quality Control Screens
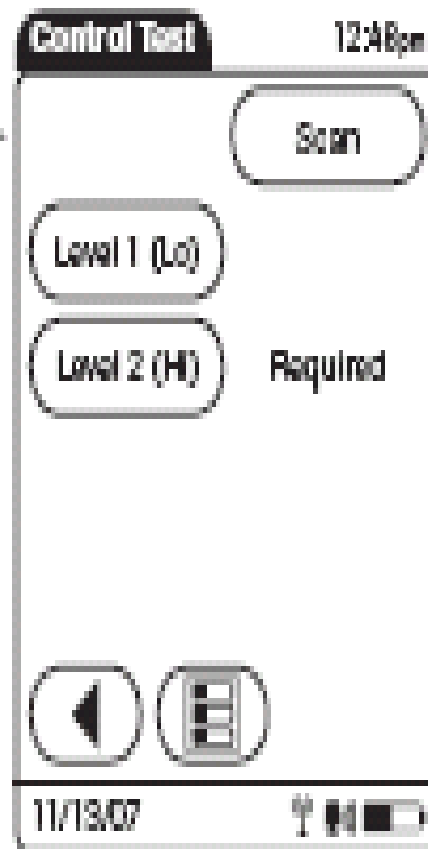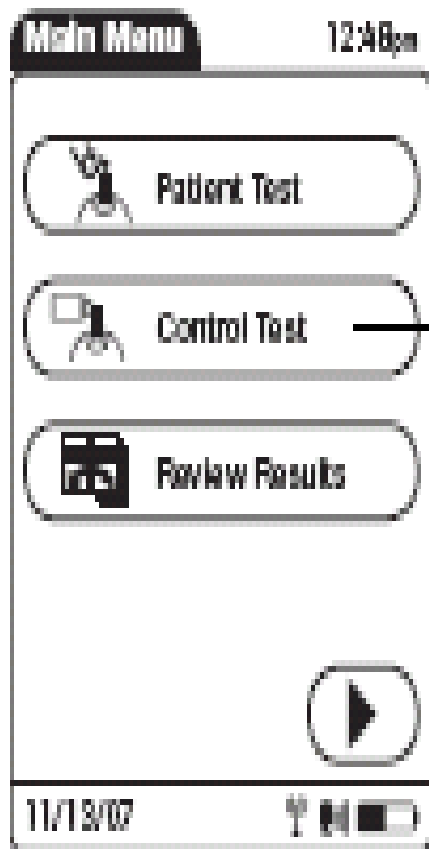
Control/ Strip Confirmation

Touch the scan symbol on the screen to enter the lot # of the Control/Strips
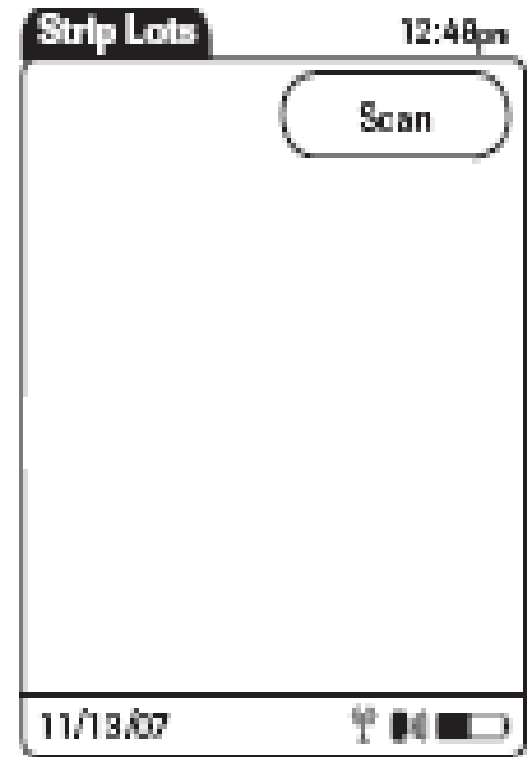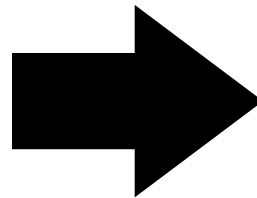
Scan the lot number on the control vial

Scan the lot number on the test strips

Performing Quality Control Test

"Flashing Drop" symbol appears.
- Meter is ready for QC sample.
- Remove cap and apply control solution.
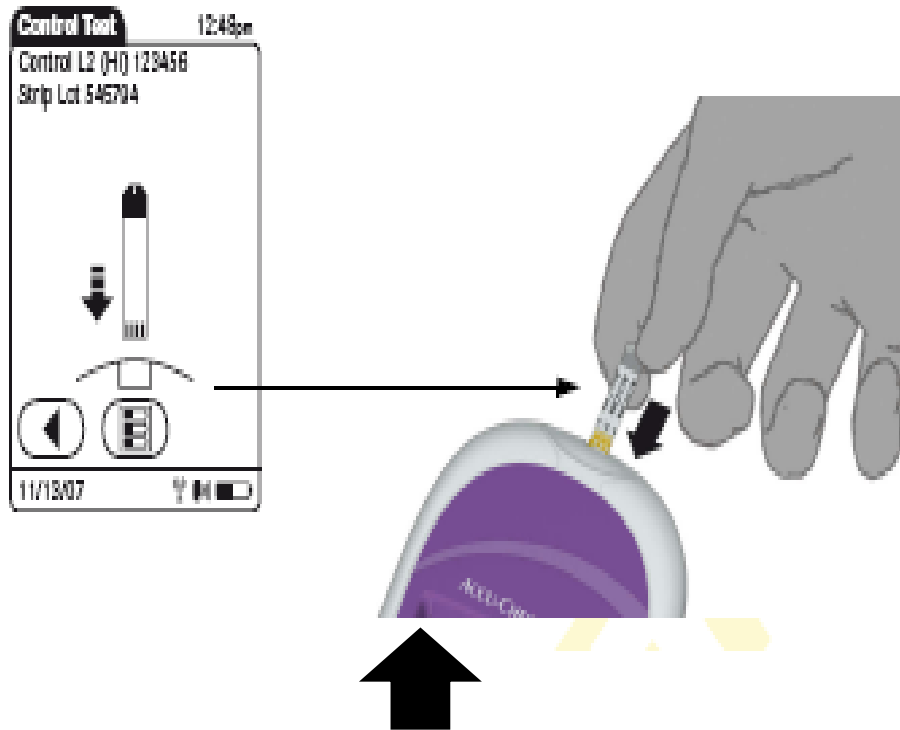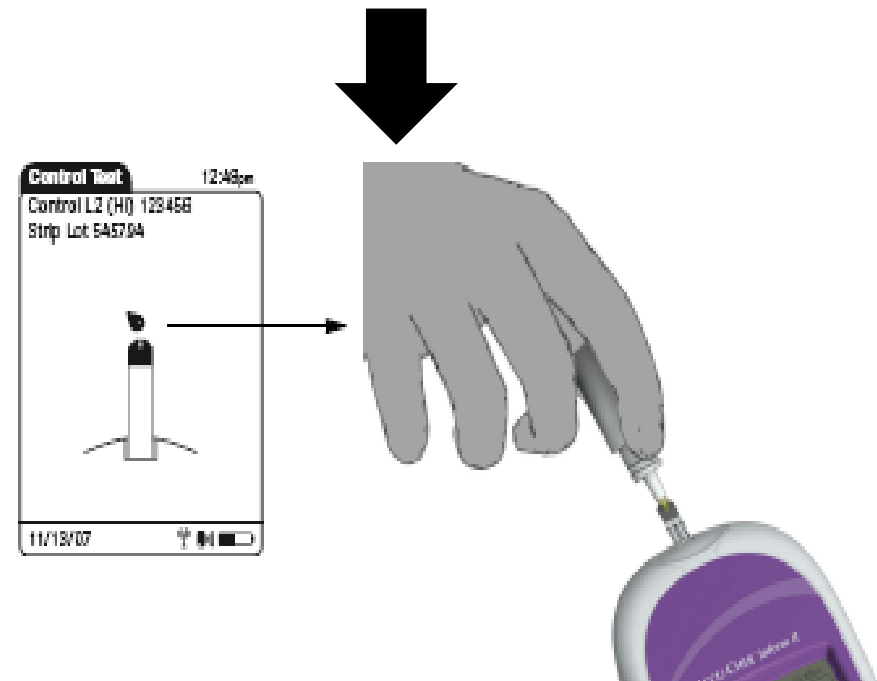
"**Flashing Arrow**" symbol appears.
   Insert test strip into test strip port.

Result Screen

Actions for Failed Control Test

If "FAIL" appears touch " ⬭ ". You may enter up

to 3 comments.

• Repeat failed control.

• For "FAIL" control result consider the following.

    o The test strip vial has been left opened for a period of time

    o Procedural error

    o The test strip or controls have been exposed to very high or low temperatures

    o The control solutions are expired and/or contaminated.

NOTE: Report two consecutive failures to laboratory Point of Care Coordinator (POCC)706-787-8359

Start Patient Testing

- Scan your Operator ID Badge
- Select "Patient Test" on the screen.
- Scan the patient's armband

- Note: If the patient's armband cannot be scanned, carefully enter the patient's ID number manually, and verify the identification in the meter before accepting the entry.

- **Per Hospital policy all patients must be identified with two identifiers**
  - Full name and date of birth

Patient Testing
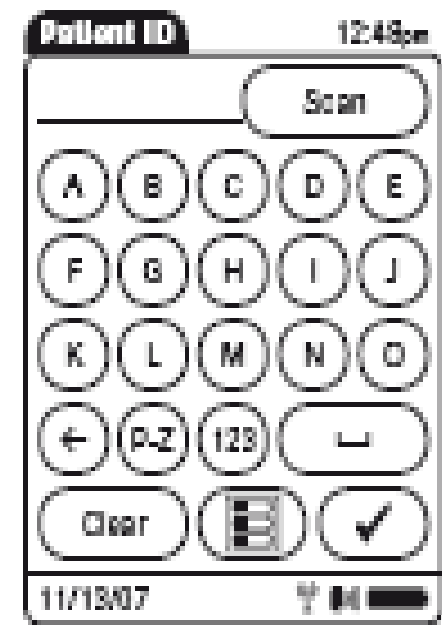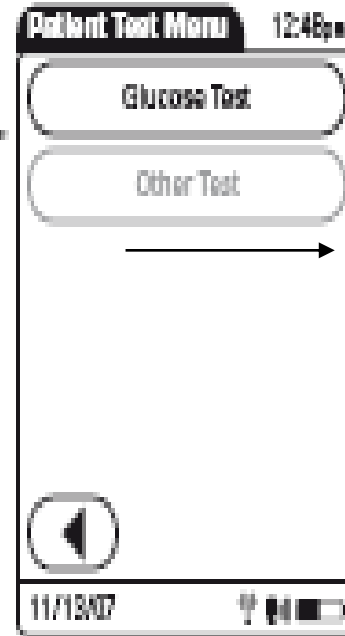
Step 1: Select patient test from menu

Step 2: Select Glucose Test

Step 3: Scan in Patient hospital number. (Meter will prompt you to confirm patient details)

Step 4: Scan in Test strips

* Check Patients details at top of screen
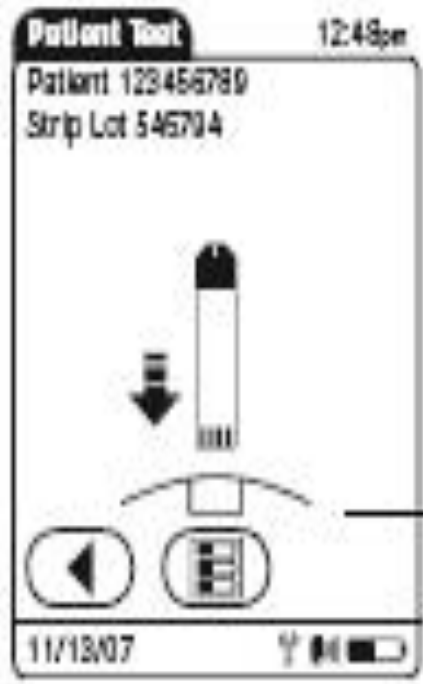
■ **Check test strip code and insert strip.**

Apply patient blood when prompted.

Patient Test   12:48pm
Patient: 123456789
Strip Lot 545794

11/13/07
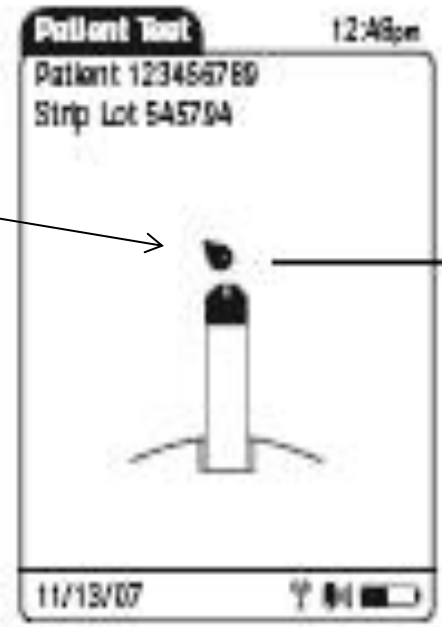
NOTE
"Type Bad Dose" error indicates that the sample quantity is insufficient.

* **Make sure to wipe away the first drop of blood.**

Review Results
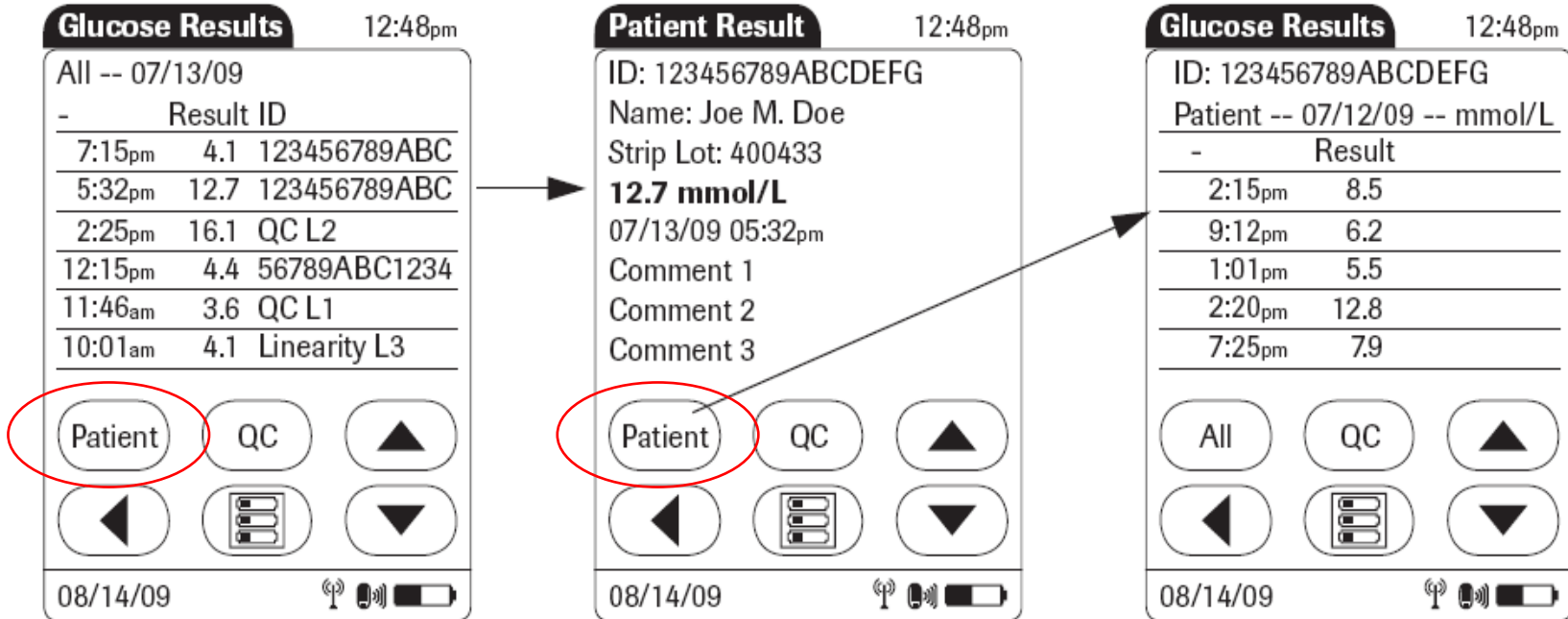
From main menu screen touch '*Review Results*'. (Patient/QC)

Stored test results are displayed in a sequential list.
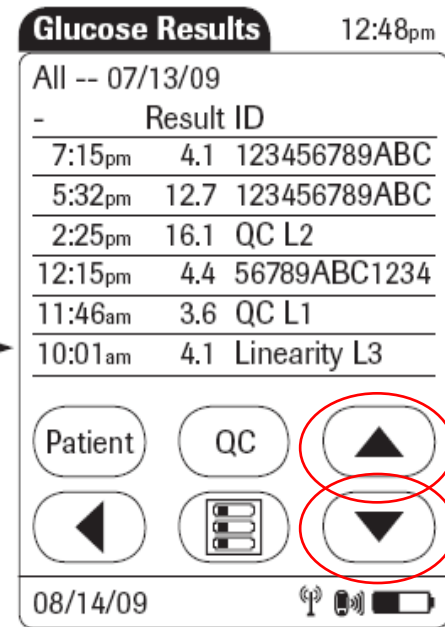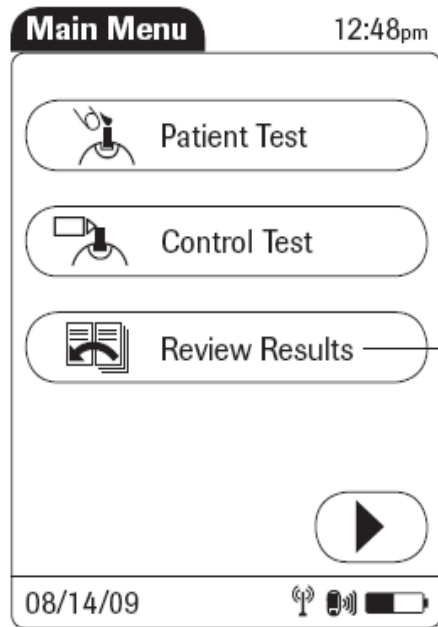
Touch ▲ or ▼ to scroll up or down in the list. Results are grouped by date.

- Touch an entry in list to display related details.

- Touch 'Patient' symbol to display results for a specific patient only – Test results available with date and time of test only, no Patient specific ID.

- It is a work rule violation to test yourself or co-workers.

- Exception to this is an emergency, the person will need to go to the Emergency Room for assistance.

Meter, Base Unit, and Carrying Case Cleaning Procedure:

• Meter must be turned off and the base unit must be unplugged prior to cleaning.

• Clean the outside of the Accu-Chek Inform II System with hospital approved disinfecting wipes only. With the meter upside down begin cleaning the device, avoiding the strip opening. Moisten all surface areas of the meter ensuring to remove all visible soil. Allow to dry according the hospital policy to be fully disinfected.

• Follow the same guidelines for cleaning the base, avoiding contact with the electrical leads

Reference Ranges

POC Glucose Ranges
- Normal 70-100 mg/dL

DDEAMC Reference Ranges are:
- Critical LO= Less than 50 mg/ dL
- Critical HI= greater than 450 mg/dL

(If you get any of these values, it indicates the results are outside the reading range and you must repeat the test.)

➢ If you get a value that exceeds the normal range value but in within the high and low parameters please ensure you notify the HCP and notate this value in the patients record.

NOTE: The meter will read as low as 10 mg/dL and will be indicated by a reading of "LO" on the meter display. It will read higher than 600 mg/dL and will be indicated by a "HI" reading on the meter display.**

CHCS Report

```
Search by Order date          04 Jul 17 - 13 Jul 17          Display by Date
_____

                              Military Unit: UNKNOWN
                                Col: 13Jul17@0651                      PLASMA
     STAT                    Hcp:                         Req Loc: EMERGENC
     Ordered Panel Test: CMP
     Performing Lab: MAIN LAB BLD 300,FT GORDON
     170713 CHM 146937
     GLUCOSE . . . . . . . .      H*         (70-100)      mg/dL     C:HLM13Jul17@0750
                         1025.9
     Result Comment:
     Critical value read back by authorized receiver. TELEPHONICALLY NOTIFIED TO
     DR AKERS @ 0749 HM
     BUN . . . . . . .  62.3     H          (6.0-23.0)     mg/dL     C:HLM13Jul17@0725
     CREAT . . . . . .   4.3     H          (0.3-1.2)      mg/dL
     Interpretations:
+    Reference Range Source: SIEST.G.ED., Reference Values in Human Chemistry;
_____

newInquiry    pgDn    pgUp    Print    eXit    Help
```

Data Manager

Alere RALS System

All Institutions - BRENDA ARNETT   Settings   Help   Logout

| Status | Results | Devices | Consumables | Operators | Locations | Tasks | Administration | www.RALS.com |

Flagged Results   Results Review   Levey-Jennings   Linearity   Proficiency Review

Device Type: ACCU-CHEK® Inform II   Date Range: 07/12/2017 To 07/13/2017   Sample Status: All Flagged

Location: All Locations   Reason For Failure: All Failures   LIS Upload Failure: All Upload Failures

Apply   Review   Edit   Upload to LIS   Override   Do Not Upl...   ...vents

Actual result 1025.9 mg/dL

Date and Time	Patient ID	Location	Operator	Result	Commen...	Reason For Failure	Sample Status	Strip Lot #
07/13/2017 06:34:13	30255138095	ED		HI		Outside AMR (High), Critical Value (High)	EVALUATE	475310
07/12/2017 16:45:19	20416423780	11W		84 mg/dL		Repeated Test	EVALUATE	475310
07/12/2017 16:41:21	20416423780	PCU		401 mg/dL		Repeated Test	EVALUATE	475310
07/12/2017 14:44:44	99999999999	ED		110 mg/dL			UPLOAD FAILED	475310

****All alert values must be repeated using a fresh sample from new stick.

Actions taken must be documented in the meter by entering a comment.

- Report to caregiver or provider, and follow his/her recommendations.

- Alert values obtained must be reported immediately to the care nurse for assessment of the patient.

- Results must be verified by the clinical laboratory if requested by the provider.

Limitations

Due to medical conditions:

- Hematocrit should be 10-65%
- Lipemic samples (triglycerides) >1800 mg/dl
- Galactose blood concentrations >15 mg/dL
- Impaired peripheral circulation

For further information refer to Test Strip package insert or SOP

Proficiency Testing

- Proficiency Testing (PT) will be delivered 3 times per year.

- Each sample will need to be performed on all meters on your unit.

- Independently, run samples in **PROFICIENCY TESTING** mode, a POCT Staff member will be present to assist.

- Record the results on the form provided.

- If an operator's performance results in an out-of-range PT, the POCT staff will observe, using the same specimen, to re-access their competency.

- **Finger stick:**
  - ✓ Remove/dry all alcohol form puncture site.
  - ✓ Wipe first drop of blood off and use second drop for testing.

- **Applying Sample:**
  - ✓ Make sure the yellow target area is filled with blood.
  - ✓ Do not lay meter on soft surfaces.

- **Repeat test if results are critical or if they appear inconsistent with patient's symptoms.**

- **Close lid containing strip promtly.**

Training Competency

Step One
• Print out the documentation showing you have passed the test.

Step Two
• Let your Unit POCT Trainer know you have completed this portion of your training and present him/her with documentation.

Step Three
• Demonstrate your performance of a ACCU-CHEK®
Inform II Glucose test for your trainer. Have the training documented on your glucose competency sheet and have your Unit POCT Trainer submit a memorandum to the POCT Staff so your information can be updated in the system.

Step Four
Place all certificates and training records in your CAF Folder.

References

- POCT 5.4 WHOLE BLOOD GLUCOSE TESTING ACCU-CHEK INFORM® II SYSTEM

- POCT 5.0 Quality Control/Quality Improvement Policy

POINT OF CARE TESTING (POCT) COMPETENCY ASSESSMENT CHECK-LIST

Source of Performance Standard: Care of Patients-Continuum of Care- Point of Care Testing

Demonstrates Point of Care Testing competency related to specific skills and procedures IAW Point of Care Testing standards.

CRITICAL BEHAVIOR (SOURCE OF PERFORMANCE STANDARD)	* Self Assess	+ Evaluation Method	Type of Assessment											
			Initial				Six Month				Annual			
			Pass (Y/N)	Initials		Date	Pass (Y/N)	Initials		Date	Pass (Y/N)	Initials		Date
				Operator	Trainer			Operator	Trainer			Operator	Trainer	
ACCU-CHEK INFORM II GENERAL INFORMATION		**CRITICAL THINKING:** *Perform procedures and evaluate results.*												
Read Standard Operating Procedure (SOP).														
Obtained 80% or above on a written assessment.		W, L, PE	Y			9/10/14								
Identifies equipment parts and supplies.		W, L, PE	Y			9/10/14								
Demonstrates knowledge of ON/OFF features of the Accu-Chek Inform II meter		W, L, PE	Y			9/10/14								
Knowledge of instrument (**LOCK OUT**) when the Accu-Chek Inform II information has not been downloaded to the database.		W, L, PE	Y			9/10/14								
Knowledge of the location of the Owner's Manual and the Error Code interpretations.		W, L, PE	Y			9/10/14								
Understands and perform appropriate instrument Maintenance.		W, L, PE	Y			9/10/14								
ACCU-CHEK INFORM II QUALITY CONTROL (QC)		**CRITICAL THINKING:** *Perform procedures and evaluate results.*												
Read Standard Operating Procedure (SOP).														
Knowledgeable about stability and storage of control strips and liquid control solution.		W, L, PE	Y			9/10/14								
Understand calibration (Code Key) procedures and understands when Code Key is necessary.		W, L, PE	Y			9/10/14								
Understands proper troubleshooting when control is not within the acceptable range.		W, L, PE	Y			9/10/14								
Knowledge of proper documentation of any QC issues.		W, L, PE	Y			9/10/14								

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