



## **Nursing Education Program**

### **Laboratory Reference Ranges and Outside Materials**

Purpose: To provide guidance for students on appropriate reference materials

Procedure:

1. Normal ranges of laboratory values can vary between resources, providers, and institutions. The attached appendix is the accepted MCCC reference ranges for laboratory values.
2. Laboratory values may be incorporated into examination questions provided that the applicable reference range is included.
3. Students are expected to use the class preparation materials provided by the program and the faculty. Materials not vetted by the nursing education faculty may not contain accurate information and students should use caution in reading outside materials. The nursing faculty critically appraise evidence to determine which materials are most relevant; students may not have the same skill to determine which material is appropriate for use.

Effective Date: July 1, 2019

Reviewed: May 2022

Revised: May 2026

Approved by:

A handwritten signature in black ink, appearing to read 'Elizabeth A. Mizerek', with a long horizontal line extending to the right.

Elizabeth A. Mizerek, PhD, RN, FN-CSA, CNE, CEN, CPEN, FAEN  
Dean of Science, Health Professions, and Nursing

## **Laboratory Reference Ranges Appendix**

NCLEX expects that you can identify normal laboratory values and compare to client laboratory values. The following list is outlined in the NCLEX Detailed Test Plan. **Memorize these normal values; you will be tested on them.** The values listed below are normal adult values.

| Arterial Blood Gasses (ABGs) |                           |
|------------------------------|---------------------------|
| pH                           | 7.35-7.45                 |
| PO <sub>2</sub>              | 80-100 mmHg               |
| PaCO <sub>2</sub>            | 35-45 mmHg                |
| SaO <sub>2</sub>             | Equal or greater than 95% |
| HCO <sub>3</sub>             | 22-26 mEq/L               |

| Basic Metabolic Panel (BMP) |                                                  |
|-----------------------------|--------------------------------------------------|
| Sodium (Na <sup>+</sup> )   | 135-145 mEq/L; panic value is less than 115mEq/L |
| Potassium (K <sup>+</sup> ) | 3.5-5.0 mEq/L                                    |
| Glucose                     | 70-105 mg/dL ( <b>fasting</b> )                  |
| Creatinine (Cr)             | 0.5-1.5 mg/dL                                    |
| Blood Urea Nitrogen (BUN)   | 5-25 mg/dL                                       |
|                             |                                                  |

| Complete Blood Count (CBC) |                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------|
| Hematocrit (Hct)           | Male: 40%-54%, Female 36%-46% (Concern for values less than 15% or more than 60%) |
| Hemoglobin (Hgb)           | Male 13.5-18 g/dL, Female 12-15 g/dL                                              |
| Platelets (Plt)            | 150,000-400,000 $\mu$ l                                                           |
| White blood cells (WBC)    | 4.5-10 $\mu$ L                                                                    |

| Coagulation Studies                          |               |
|----------------------------------------------|---------------|
| Prothrombin time (PT)                        | 10-15 seconds |
| Partial Thromboplastin Time (PTT)            | 60-70 seconds |
| Activated Partial Thromboplastin Time (aPTT) | 20-35 second  |
| INR: With oral anticoagulant therapy         | 2.0-3.0 INR   |
| INR: No anticoagulant therapy.               | 0.8-1.2 INR   |

| Other Studies                              |                                                                                       |
|--------------------------------------------|---------------------------------------------------------------------------------------|
| Cholesterol (total) Adult desirable levels | Less than 200 mg/dL                                                                   |
| Glycosylated hemoglobin (HgbA1C)           | Non diabetic: less than 5.7%<br>Prediabetes: 5.7% - 6.4%<br>Diabetic: 6.5% or greater |