

# Nursing Lab Values Quick Study Academic: A Comprehensive Guide to Interpretation and Management

In the dynamic field of nursing, the ability to interpret and manage laboratory values is crucial for providing safe and effective patient care. This comprehensive guide serves as an academic resource for nurses, students, and healthcare professionals, offering a thorough understanding of the most common nursing lab values and their clinical implications.



## Nursing: Lab Values (Quick Study Academic) by Sam Sorbo

★★★★☆ 4.7 out of 5

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## Essential Lab Value Categories

- **Hematology:** Red blood cells, white blood cells, platelets, and other blood components
- **Chemistry:** Electrolytes (sodium, potassium, chloride, bicarbonate), renal function (urea, creatinine), liver function (ALT, AST, bilirubin)

- **Coagulation:** Prothrombin time (PT), partial thromboplastin time (PTT), international normalized ratio (INR)
- **Urinalysis:** Specific gravity, pH, protein, glucose, ketones

## Hematology

Test	Reference Range	Clinical Significance
<b>Hemoglobin</b>	Men: 13-18 g/dL Women: 12-16 g/dL	Anemia if below normal, polycythemia if above normal
<b>Hematocrit</b>	Men: 36-52% Women: 32-48%	Anemia if below normal, polycythemia if above normal
<b>Red Blood Cell (RBC) Count</b>	4.5-5.9 million/ $\mu$ L	Anemia if below normal, polycythemia if above normal
<b>White Blood Cell (WBC) Count</b>	4,000-11,000/ $\mu$ L	Infection if elevated, neutropenia if decreased
<b>Platelet Count</b>	150,000-450,000/ $\mu$ L	Thrombocytopenia if below normal, thrombocytosis if above normal

## Chemistry

<b>Test</b>	<b>Reference Range</b>	<b>Clinical Significance</b>
<b>Sodium</b>	135-145 mEq/L	Hyponatremia if below normal, hypernatremia if above normal
<b>Potassium</b>	3.5-5.0 mEq/L	Hypokalemia if below normal, hyperkalemia if above normal
<b>Chloride</b>	98-107 mEq/L	Hypochloremia if below normal, hyperchloremia if above normal
<b>Bicarbonate</b>	22-29 mEq/L	Metabolic acidosis if below normal, metabolic alkalosis if above normal
<b>Urea Nitrogen (BUN)</b>	7-20 mg/dL	Elevated in renal failure
<b>Creatinine</b>	0.6-1.2 mg/dL	Elevated in renal failure
<b>Alanine Aminotransferase (ALT)</b>	0-40 U/L	Elevated in liver disease
<b>Aspartate Aminotransferase (AST)</b>	0-35 U/L	Elevated in liver disease
<b>Total Bilirubin</b>	0.1-1.2 mg/dL	Elevated in liver disease

## Coagulation

Test	Reference Range	Clinical Significance
<b>Prothrombin Time (PT)</b>	11-13 seconds	Elevated in coagulation disorders
<b>Partial Thromboplastin Time (PTT)</b>	25-35 seconds	Elevated in coagulation disorders
<b>International Normalized Ratio (INR)</b>	0.8-1.2	Used to monitor anticoagulant therapy

## Urinalysis

Test	Reference Range	Clinical Significance
<b>Specific Gravity</b>	1.003-1.030	Low in diabetes insipidus, high in dehydration
<b>pH</b>	4.5-8.0	Acidic in acidosis, alkaline in alkalosis
<b>Protein</b>	Negative	Proteinuria if positive, indicating kidney damage
<b>Glucose</b>	Negative	Glycosuria if positive, indicating diabetes mellitus
<b>Ketones</b>	Negative	Ketones present if positive, indicating high blood sugar

## Interpreting Lab Values

When interpreting lab values, consider factors such as the patient's age, sex, race, and medical history. Compare results to reference ranges, but also consider individual patient variations.

Abnormal lab values may indicate a specific disease or condition, but they can also be affected by factors such as medications, diet, and exercise. It is important to correlate lab results with the patient's clinical presentation and physical examination findings.

### **Managing Abnormal Lab Values**

Once abnormal lab values are identified, the nurse's role is to:

- Assess the patient for signs and symptoms of the underlying condition
- Consult with the healthcare provider to determine if further testing is necessary
- Educate the patient about the abnormal values and any necessary lifestyle modifications or treatment options
- Monitor the patient for improvement or worsening of symptoms
- Adjust patient management as needed based on changes in lab values or patient condition

The interpretation and management of nursing lab values are essential to provide safe and effective patient care. By understanding the common lab values and their clinical significance, nurses can identify potential health problems early on and develop appropriate interventions to optimize patient outcomes.

This comprehensive guide serves as a valuable resource for nurses, students, and healthcare professionals alike, empowering them with the knowledge and skills necessary to navigate the complex world of laboratory diagnostics and patient management.



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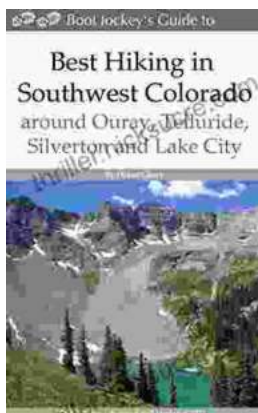
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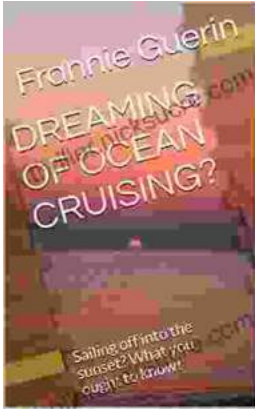
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