

NURSING LAB VALUES & HIGH-YIELD MNEMONICS

ESSENTIAL FAST-FACTS FOR NCLEX, CBT, AND CLINICAL PRACTICE

01 LAB VALUES

02 MEMORY HACKS

03 CLINICAL SAFETY



K⁺
3.5 – 5.0 mEq/L



Na⁺
135 – 145 mEq/L



Cr
0.6 – 1.2 mg/dL



AST/ALT
10 – 40 U/L



Troponin
< 0.04 ng/mL



SpO₂
≥ 95%



REPEAT
RECALL
RETAIN



SAFER
NURSES
BRIGHTER
TOMORROWS

SMALL
FACTS
BIG
IMPACT

KNOW
APPLY
KEEP
PATIENTS
SAFE

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A concise clinical companion for nursing students and healthcare professionals

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How to Use This Guide

YOUR CLINICAL COMPANION

Learn the range. Anchor the mnemonic. Apply the safety principle.

Welcome

This guide is designed for nursing students and international healthcare professionals. It simplifies frequently tested lab values and medical concepts into easy-to-remember 'hacks' that stick.

1**VALUE****2****MNEMONIC****3****PRACTICE**

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Educational Use Only:

This guide is intended solely as an educational memory aid for exam preparation (NCLEX/CBT/OSCE). It does not constitute medical advice, diagnosis, or clinical guidelines. Reference ranges vary across hospital systems and regional laboratories. Healthcare professionals and students must always verify against their local facility protocols, manufacturer guidance, and direct physician orders for clinical care.

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The "Big 5" Electrolytes

Electrolytes are the most tested area in nursing exams. Memory is key.

Na**Sodium (Na⁺)****135 - 145 mEq/L**

Mnemonic: Think of a bag of salty chips. They usually cost between \$1.35 and \$1.45.

K**Potassium (K⁺)****3.5 - 5.0 mEq/L**

Mnemonic: There are usually 3 to 5 bananas in a bunch, and you want them to be ripe (5.0).

Ca**Calcium (Ca²⁺)**

Mnemonic: "Call 9-1-1" (roughly 9 to 11). Calcium is an emergency for heart/muscle contraction.

Mg**Magnesium (Mg²⁺)**

Mnemonic: "Think of a Magnifying glass: it magnifies small things from 1.3 to 2.1 times."

Cl**Chloride (Cl⁻)****98 - 107 mEq/L**

Mnemonic: Think of a swimming pool. The best temperature for a chlorinated pool is 98 to 107 degrees.



Hematology: Blood & Clotting

W**WBC (White Blood Cells)****5,000 - 10,000/mm³**

Mnemonic: Think of a "Work Week"—you usually work 5 to 10 hours a day (or have 5k to 10k steps).

P**Platelets****150,000 - 400,000/mm³**

Mnemonic: You need a "Plate" for your 150 to 400 guests at a party.

HEMOGLOBIN (HGB)

FEMALES**12-16 g/dL**

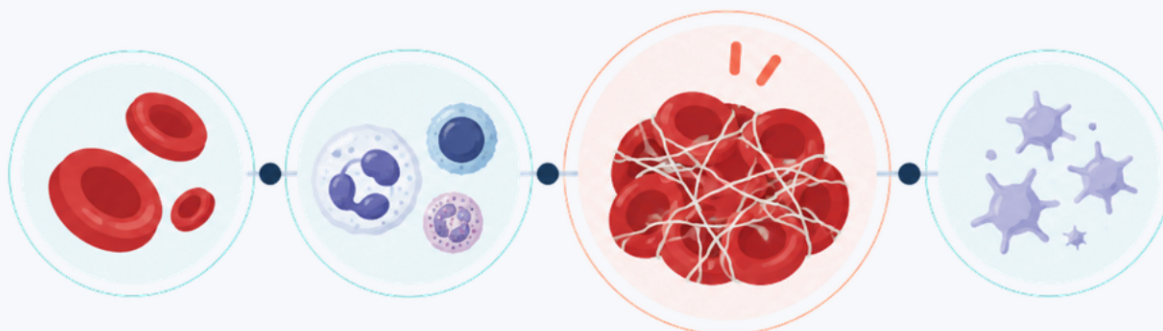
(Puberty starts at 12-16)

MALES**14-18 g/dL**

(Puberty starts at 14-18)

HEMATOCRIT (Hct)

Trick: It is always roughly 3x the Hemoglobin. (Ex: Hgb 15 × 3 = Hct 45%).

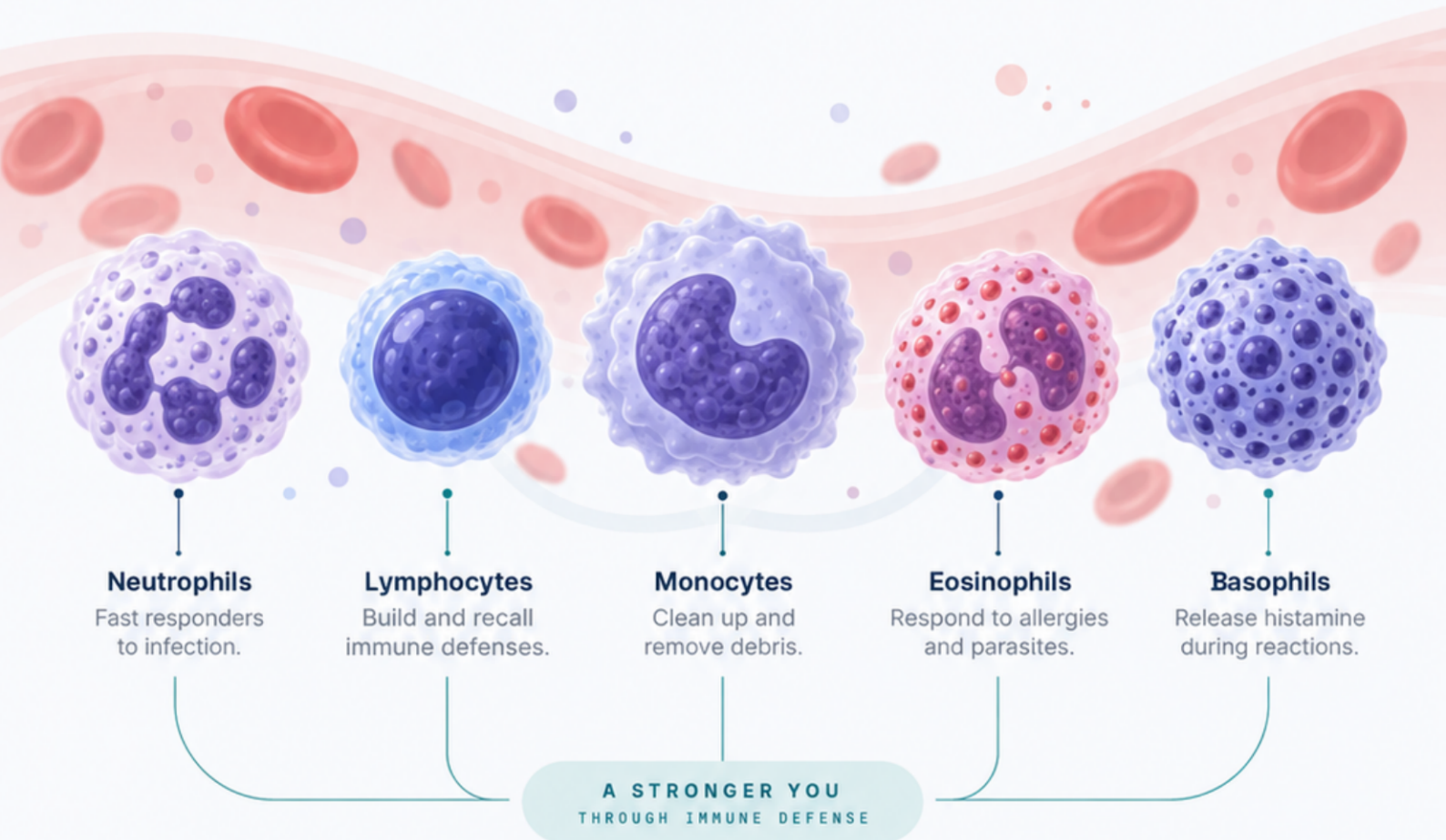
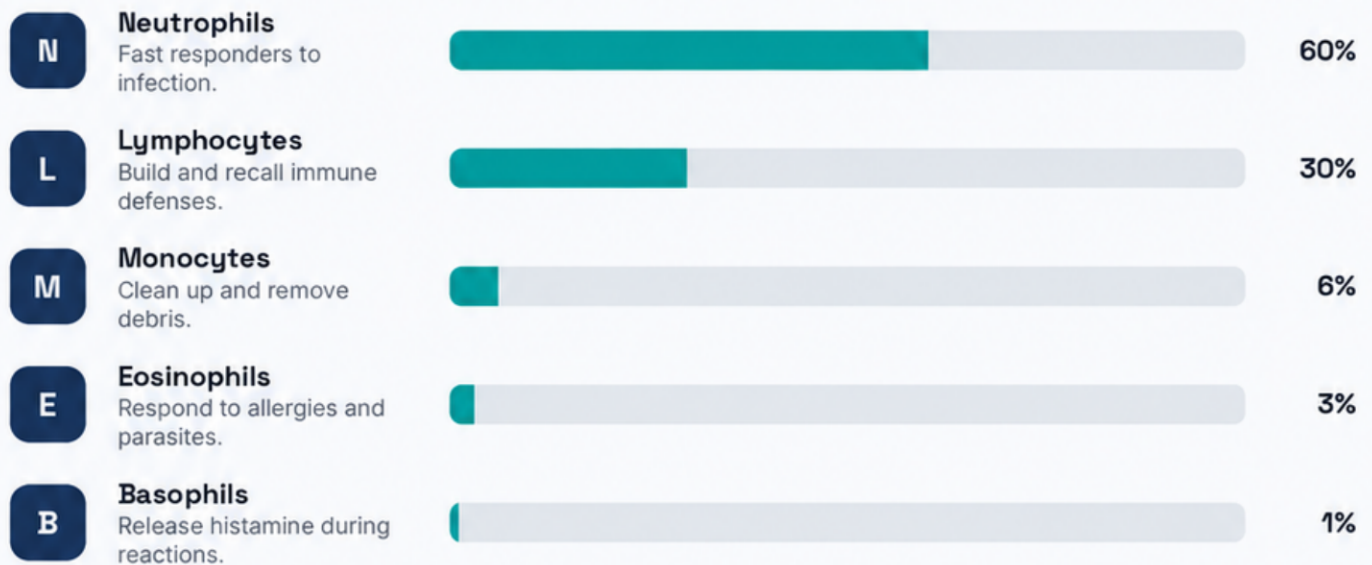
Hct ≈ Hgb × 3

The WBC Differential

Who is the most common?

MNEMONIC

Never Let Monkeys Eat Bananas



Renal & Metabolic Values

B BUN (Blood Urea Nitrogen)**10 - 20 mg/dL**

Mnemonic: A hamburger BUN at a restaurant costs about \$10 to \$20.

Cr Creatinine**0.6 - 1.2 mg/dL**

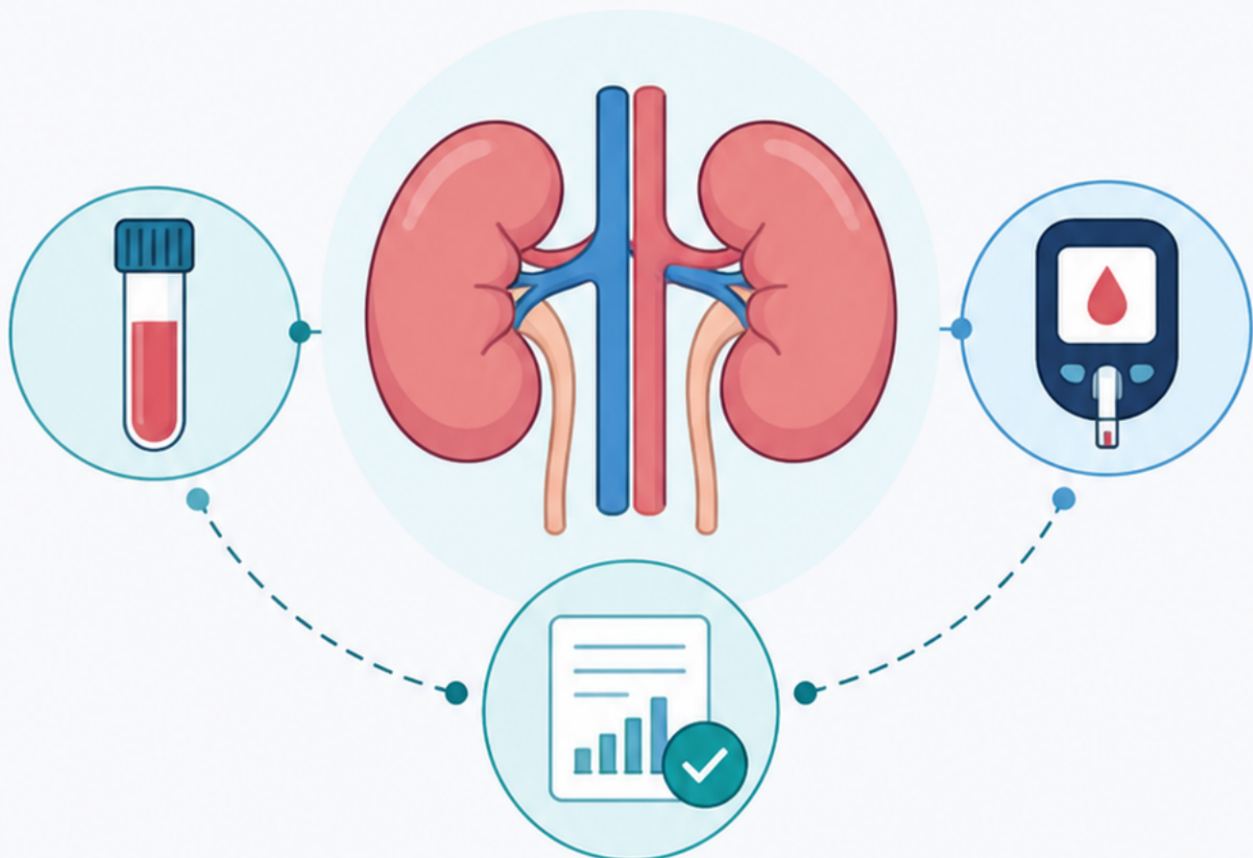
Mnemonic: Think of a "Creature" (Creatinine). It's small but dangerous—keep it under 1.2.

G Glucose (Fasting)**70 - 105 mg/dL**

Mnemonic: Most people like to retire at 70 and live to 105.

A1 HbA1c (Diabetes control)**< 7%**

Mnemonic: "Lucky 7." Keep the A1c under 7% to be lucky and healthy.



QUICK RECALL BUN 10-20 | Creatinine 0.6-1.2 | Fasting glucose 70-105 | HbA1c < 7%

Cardiovascular High-Yield

RIGHT-SIDED VS. LEFT-SIDED HEART FAILURE



LEFT-SIDED = LUNGS

Shortness of breath, crackles, cough.



RIGHT-SIDED = REST OF BODY

Edema, JVD, weight gain.

TREATMENT FOR MYOCARDIAL INFARCTION (HEART ATTACK)

MONA

M

Morphine.

O

Oxygen (If $\text{SpO}_2 < 90\%$).

N

Nitroglycerin.

A

Aspirin.



Glucose & Insulin Management

1. BLOOD GLUCOSE TARGETS

Normal fasting: 70-105 mg/dL (US) / 3.9-5.8 mmol/L (UK) · HbA1c (3-month average): under 7%

2. INSULIN TYPES: THE PEAK IS THE DANGER ZONE

The peak is when insulin works the hardest and blood sugar is at its lowest.

Rapid-Acting (Lispro/Aspart)

"15 minutes feels like an hour during 3 rapid logs"

ONSET 15 min **PEAK** 1 hour **DURATION** 3 hours

Short-Acting (Regular)

"Short-staffed nurses go from 2 to 4"

ONSET 30 min **PEAK** 2-4 hours **DURATION** 5-8 hours

Intermediate (NPH)

"NPH = Not Pretty Hot (4-12 hrs later)"

ONSET 1.5 hrs **PEAK** 4-12 hours **DURATION** 12-18 hours

Long-Acting (Lantus/Glargine)

"The Old Long Lantern burns for 24 hours"

ONSET 2 hrs **PEAK** None



Liver Enzyme Reference

TEST	NORMAL RANGE (US/NCLEX)	HIGH-YIELD NURSING TIP
ALT (Alanine Aminotransferase)	10 to 40 U/L	Most specific sign of liver damage.
AST (Aspartate Aminotransferase)	10 to 40 U/L	Linked with Alcohol, Statins, and Tylenol.
Bilirubin (Total)	0.3 to 1.0 mg/dL	Above 2.5 can show yellow skin or eyes.
Albumin	3.5 to 5.0 g/dL	Low levels can cause ascites and edema.
Ammonia	15 to 45 mcg/dL	High levels can cause confusion. Lactulose helps.



LFT

Scan the pattern: value, range, nursing implication. Keep the facility's laboratory reference interval in view.

The 6 Rights of Medication Administration

A six-point pause before every administration.

1 Right Patient

VERIFY BEFORE ADMINISTRATION

2 Right Medication

VERIFY BEFORE ADMINISTRATION

3 Right Dose

VERIFY BEFORE ADMINISTRATION

4 Right Route

VERIFY BEFORE ADMINISTRATION

5 Right Time

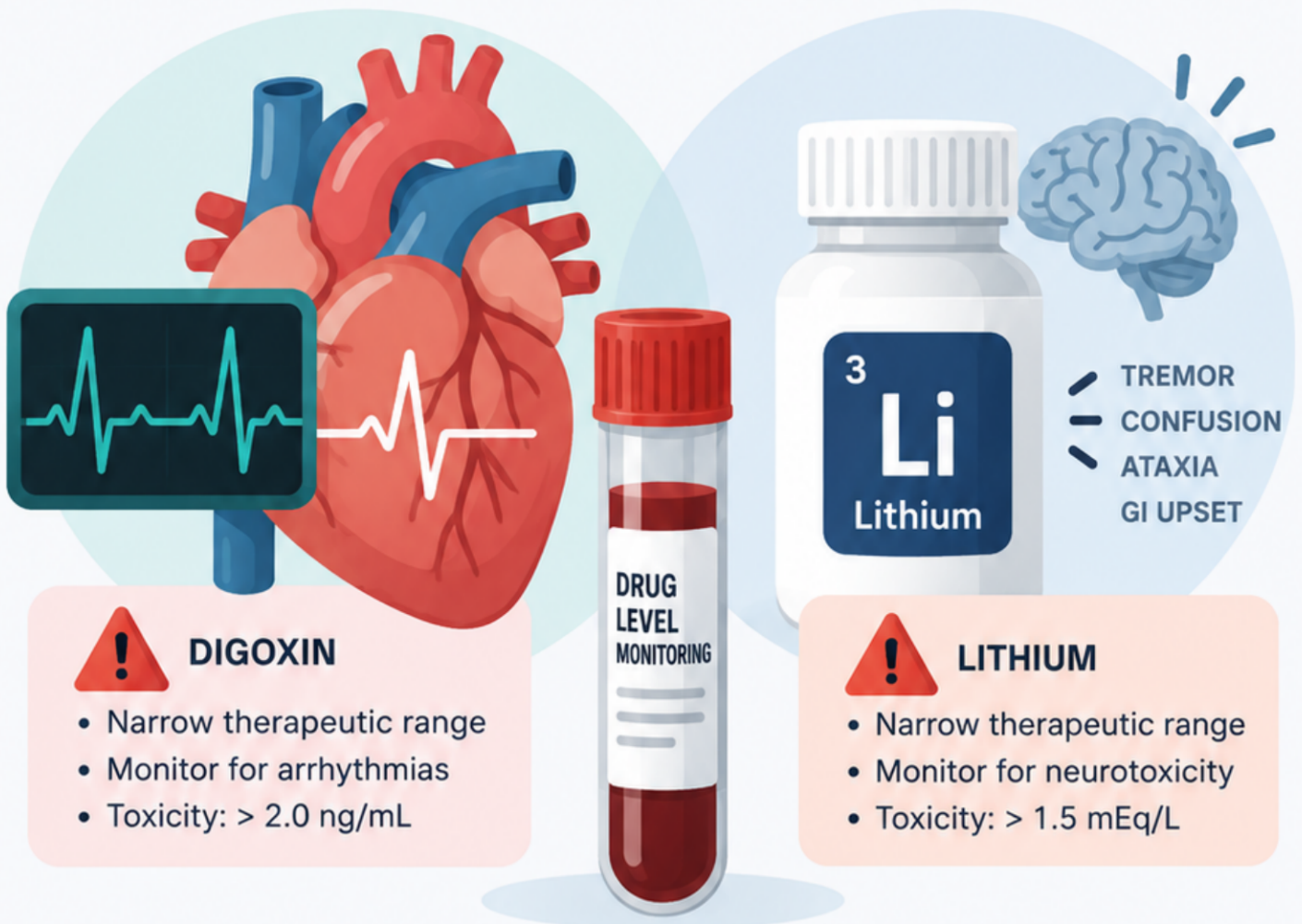
VERIFY BEFORE ADMINISTRATION

6 Right Documentation

VERIFY BEFORE ADMINISTRATION



Therapeutic Drug Levels to Watch

Dx DIGOXIN**0.8 - 2.0 ng/mL****OVER 2.0 IS TOXIC!****³Li** LITHIUM**0.6 - 1.2 mEq/L****OVER 1.5 IS TOXIC!****TOXICITY THRESHOLDS****Digoxin > 2.0****Lithium > 1.5**

ABG: Arterial Blood Gas

THE ROME MNEMONIC

RESPIRATORY OPPOSITE

pH high, PaCO₂ low = Alkalosis

METABOLIC EQUAL

pH high, HCO₃⁻ high = Alkalosis

NORMAL ABG VALUES

pH

7.35 - 7.45

PaCO₂

35 - 45 mmHg

HCO₃⁻

22 - 26 mEq/L



ABCDE & PQRST

SKIN LESION ASSESSMENT (ABCDE)

A

Asymmetry

B

Border

C

Color

D

Diameter

E

Evolving

PAIN ASSESSMENT (PQRST)

P

Provokes

What caused it?

Q

Quality

Sharp or dull?

R

Radiates

Does it move?

S

Severity

1-10 scale

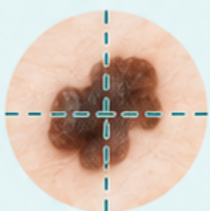
T

Time

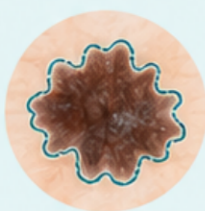
When did it start?

ABCDE

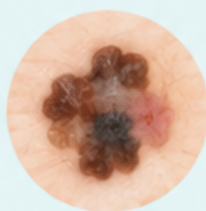
SKIN LESION ASSESSMENT

**A**

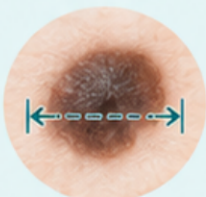
Asymmetry

**B**

Border

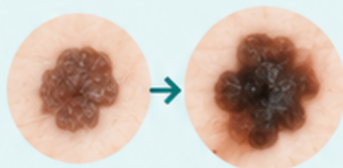
**C**

Color

**D**

Diameter

> 6 mm (pencil eraser)

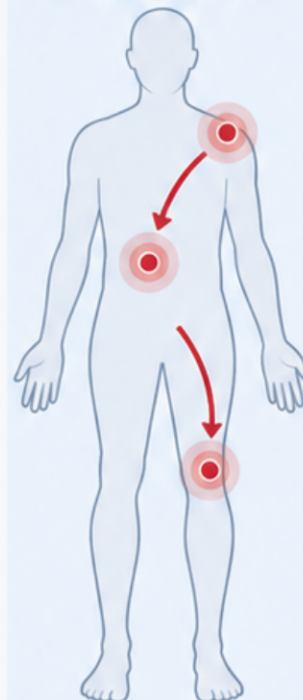
**E**

Evolving

Changes in size, shape, color, or symptoms

PQRST

PAIN ASSESSMENT

**P**

Provokes



What caused it?

Q

Quality



Sharp or dull?

R

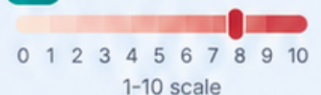
Radiates



Does it move?

S

Severity



1-10 scale

T

Time



When did it start?

Isolation Precautions

Infection Control (the "Precautions" charts that are huge on the CBT).

1. Standard Precautions (The Baseline)

For ALL patients: Hand hygiene is #1. PPE: Wear Gloves, Gown, or Mask only if you expect to be "splashed" by blood or body fluids.

AIRBORNE

"My Chicken Hez TB"

PPE REQUIREMENTS

N95 Respirator, Private Room, Negative Pressure.

KEY DISEASES

Measles, Chickenpox, Herpes Zoster (Disseminated), TB.

DROPLET

"P-I-M-P"

PPE REQUIREMENTS

Surgical Mask, Private Room (Keep 3ft distance).

KEY DISEASES

Pertussis, Influenza, Mumps, Pneumonia, Meningitis.

CONTACT

"MRS. WEE"

PPE REQUIREMENTS

Gown & Gloves, Dedicated Equipment.

KEY DISEASES

MRSA/VRE, RSV, Skin Infections, Wound Infections, Enteric (C-Diff).



The 5 Moments for Hand Hygiene

The "5 Moments for Hand Hygiene" is a global safety standard developed by the World Health Organization (WHO). It is a "must-know" for the NMC CBT (UK) and is frequently tested on the NCLEX (US) as part of the Safety and Infection Control category.

1

Before Touching a Patient

To protect the patient against harmful germs carried on your hands.

2

Before a Clean/Aseptic Procedure

To protect the patient against harmful germs, including the patient's own, from entering their body (e.g., starting an IV or wound care).

3

After Body Fluid Exposure Risk

To protect yourself and the healthcare environment from harmful patient germs.

4

After Touching a Patient

To protect yourself and the healthcare environment from harmful patient germs.

5

After Touching Patient Surroundings

Even if you didn't touch the patient, touching the bedrails, linens, or bedside table requires hand hygiene.



About the Author

JM**Joshua Thomas Mathew**

REGISTERED NURSE | NMC "TRAIN THE TRAINER" CERTIFIED | BRITISH COUNCIL AGENT

Clinical Experience

Joshua Thomas Mathew is a Registered Nurse and expert educator with over a decade of clinical experience in the UK National Health Service (NHS). His career is defined by his extensive work in high-pressure acute care environments within the NHS, specializing in Infectious Diseases, Trauma Orthopaedics, and Acute Medicine.

Training Authority

A Certified Expert in the NMC Test of Competence. Uniquely, Joshua holds the "Train the Trainer" Certification from an official provider of the NMC Test of Competence. This prestigious qualification formally recognizes his ability to train international nurses for the OSCE and CBT exams.

Assessment Insight

Because of this training, Joshua does not just "teach" nursing; he is formally trained in the specific assessment criteria, marking rubrics, and failure points used by UK examiners today. He uses this insider knowledge to help international nurses navigate the OSCE and CBT with confidence, ensuring his teaching methods align with the strictest UK standards.

Global Guidance

As the founder of Alfordz Consultancy & Recruitment, Joshua combines this clinical and educational authority with his status as a British Council Certified Agent (Code: 37161). He bridges the gap between textbook theory and real-world practice, helping thousands of students navigate their journey to the global stage.



References

01

NCSBN

National Council of State Boards of Nursing 2026 Guidelines.

02

WHO

WHO Laboratory Reference Standards.

03

BRITISH COUNCIL

British Council National Code of Ethical Practice.

**END OF QUICK-REFERENCE GUIDE**

Use alongside facility protocols, physician orders, and current clinical guidance.