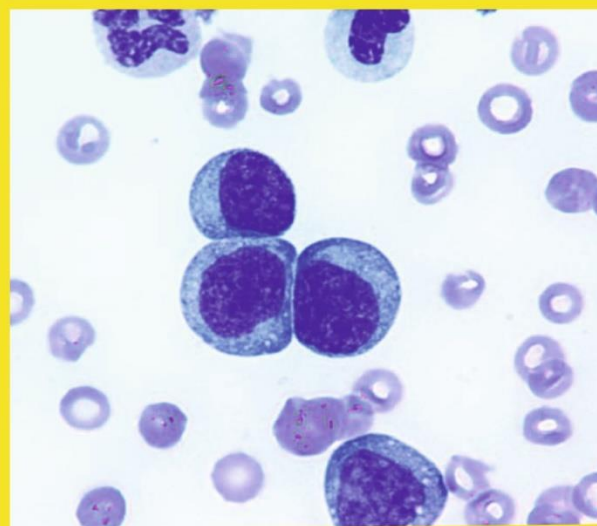
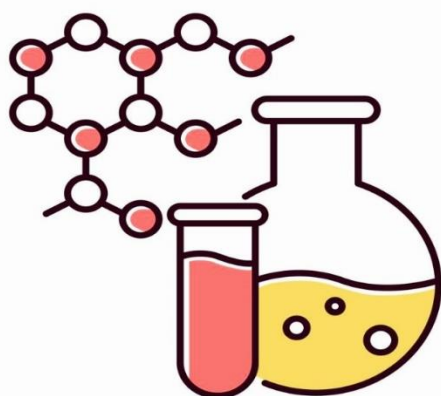


# BIOCHEMISTRY AND

# CLINICAL PATHOLOGY



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Kripa Drishti Publications, Pune.

# **BIOCHEMISTRY AND CLINICAL PATHOLOGY**

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## **PREFACE**

The thorough guide "Biochemistry and Clinical Pathology" covers the principles of biochemistry and how they are used in clinical settings. For those who are new to the field of biochemistry, this book is ideal. Understanding the molecular underpinnings of biomolecules and their metabolism requires a solid understanding of biochemistry. Understanding the molecular causes of illnesses and how drugs work is also beneficial.

Healthcare professionals need to understand the molecular causes of diseases and how drugs work, and this book aids in their understanding of the pharmacokinetic profile of medications. The syllabus for diploma students in pharmacy programs is covered in this book by the Pharmacy Council of India (PCI), but it will also help medical, paramedical, and Bachelor of Pharmacy Students grasp the fundamentals of biochemistry. Each chapter is presented in a more approachable, educational, and lucid manner overall thanks to its helpful diagrams, concise explanations, and real-world examples. This book discusses the concepts, goals, and methods of "Biochemistry and Clinical Pathology" in a unique way. The book's fundamental elements—such as its clean presentation, easy-to-read language, and contents—have all been preserved.

### **Contents:**

1. Introduction to Biochemistry
2. Carbohydrates
3. Proteins
4. Lipids
5. Nucleic Acid
6. Enzymes
7. Vitamins
8. Metabolism
9. Minerals
10. Water and Electrolytes
11. Biotechnology
12. Organ Function Tests
13. Introduction to Pathology of Blood Are Urine

## Abbreviations

Acceptable Macronutrient Distribution Range (AMDR)  
Acute Kidney Injury (AKI)  
Adenine (A)  
Adenosine Triphosphate (ATP)  
Adrenocorticotrophic Hormone (ACTH)  
Alanine Aminotransferase (ALT)  
Albumin-to-Creatinine Ratio (ACR)  
Alkaline Phosphatase (ALP)  
American Heart Association (AHA)  
Antidiuretic Hormone (ADH)  
Aspartate Aminotransferase (AST)  
Blood Urea Nitrogen (BUN)  
Bovine Serum Albumin (BSA)  
Carbon (C)  
Cardiovascular Disease (CVD)  
Chronic Kidney Disease (CKD)  
Coenzyme A (CoA)  
Complete Blood Count (CBC)  
Congenital Sucrase-Isomaltase Deficiency (CSID)  
Coronary Artery Disease (CAD)  
Cystic Fibrosis (CF)  
Cytosine (C)  
Deoxyribonucleic Acid (DNA)  
Disease-Related Malnutrition (DRM)  
Docosahexaenoic Acid (DHA)  
Electron Transport Chain (ETC)  
Erythropoietin (EPO)  
Essential Fatty Acids (EFA)  
Estimated Glomerular Filtration Rate (eGFR)  
Extracellular Fluid (ECF)  
Familial Hypercholesterolemia (FH)  
Fatty Acid Oxidation Disorders (FAODs)  
Flavin Adenine Dinucleotide (FAD)  
Flavin Mononucleotide (FMN)  
Formate Dehydrogenase (FDH)  
Free Fatty Acid (FFA)  
Gamma-Glutamyl Transferase (GGT)  
Genetically Modified (GM)  
Genetically Modified Crops (GMOs)  
Glomerular Filtration Rate (GFR)  
Glucose Dehydrogenase (GDH)  
Glycogen Storage Diseases (GSDs)  
Guanine (G)

Guanosine Diphosphate (GDP)  
Guanosine Monophosphate (GMP)  
Guanosine Triphosphate (GTP)  
Hereditary Fructose Intolerance (HFI)  
High-Density Lipoprotein Cholesterol (HDL-C)  
High-Density Lipoproteins (HDLs)  
Hormone-Sensitive Lipase (HSL)  
Human Growth Hormone (hGH)  
Human Immunodeficiency Virus (HIV)  
Hydrogen (H)  
Immune Thrombocytopenia (ITP)  
Institute of Medicine (IOM)  
Intermediate Density Lipoproteins (IDL)  
International Normalized Ratio (INR)  
International Units (IU)  
Intracellular Fluid (ICF)  
Iodine Deficiency Disorders (IDD)  
Leucine dehydrogenase (LeuDH)  
Liver Function Tests (LFTs)  
Low-Density Lipoprotein Cholesterol (LDL-C)  
Low-Density Lipoproteins (LDL)  
Maple Syrup Urine Disease (MSUD)  
Natural Killer (NK)  
Nicotinamide Adenine Dinucleotide (NAD)  
Nicotinamide Adenine Dinucleotide Phosphate (NADP)  
Non-Alcoholic Fatty Liver Disease (NAFLD)  
Non-Alcoholic Steatohepatitis (NASH)  
Oral Rehydration Solutions (ORS)  
Oral Rehydration Therapy (ORT)  
Oxygen (O)  
Penicillin G Amidohydrolase (PGA)  
Peripheral Artery Disease (PAD)  
Phenylalanine Ammonia Lyase (PAL)  
Phenylketonuria (PKU)  
Polyhydroxyalkanoates (PHA)  
Protein Kinase A (PKA)  
Prothrombin Time (PT)  
Pyridoxal Phosphate (PLP)  
Reactive Oxygen Species (ROS)  
Recommended Dietary Allowances (RDAs)  
Red Blood Cells (RBCs)  
Ribonucleic Acid (RNA)  
Severe Combined Immunodeficiency Disease (SCID)  
Solid-State Fermentation (SSF)  
Submerged Fermentation (SmF)  
Temperature (Tm)

Tetrahydrofolate (THF)  
Thiamine Pyrophosphate (TPP)  
Thrombotic Thrombocytopenic Purpura (TTP)  
Thymine (T)  
Thyroid Stimulating Hormone (TSH)  
Total Cholesterol (TC)  
Tricarboxylic Acid (TCA)  
Triglycerols (TAG)  
United Nations Children's Fund (UNICEF)  
Uracil (U)  
Urinary Tract Infections (UTIs)  
Very Low-Density Lipoproteins (VLDL)  
Very Low-Density Lipoproteins (VLDLs)  
Whilst Antidiuretic Hormone (ADH)  
White Blood Cells (WBCs)  
World Health Organization (WHO)

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