

Human Anatomy **and** **Physiology-I** **(Theory)**

Dr. Shivshankar D. Mhaske
Mr. Yogesh R. Joshi
Mr. Tushar A. Gaikwad
Mr. Abhirup R. Sagare



HUMAN ANATOMY AND PHYSIOLOGY-I (THEORY)

Dr. Shivshankar D. Mhaske

Principal, Satyajeet College of Pharmacy, Mehkar.
Buldana Maharashtra. India.

Mr. Yogesh R. Joshi

Principal, Shellino Education Society's Nanasaheb R.G. Patil Institute
of Pharmacy, Mamurabad, Jalgaon.

Mr. Tushar A. Gaikwad

HOD, Assistant Professor, SDNCRES's, Late Narayandas Bhawandas
Chhabada Institute of Pharmacy, Raigaon, Satara.

Mr. Abhirup R. Sagare

Assistant Professor, YSPM's Yashoda Technical Campus, Faculty of
Pharmacy, Satara.

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Authored By: **Dr. Shivshankar D. Mhaske,
Mr. Yogesh R. Joshi,
Mr. Tushar A. Gaikwad, Mr. Abhirup R. Sagare**

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Mr. Abhirup R. Sagare

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PREFACE

The life sciences have a strong foundation in **Human Anatomy and Physiology-I (Theory)**. While anatomy studies how the body's parts fit together and look, physiology studies how the body's parts function. This book offers a thorough explanation of anatomy and physiology along with an in-depth examination of how they relate to human health and welfare.

The appendicular section consists of the arms and legs, while the axial component consists of the brain, spinal cord, chest, abdomen, and pelvis. The lower extremities are made up of the hips, thighs, lower legs, ankles, and feet, while the upper extremities are made up of the shoulders, upper arms, forearms, wrists, and hands. The most prevalent organic compounds and other elements found in cells, cell theory, and the way the plasma membrane controls the volume and internal concentrations of the cell have all been studied. The human body is introduced in this book, along with the cellular and tissue levels of organisation, the skeletal and integumentary systems, joints and their articulation, bodily fluids and blood, the lymphatic system, the peripheral nervous system, the human body's special senses, and the cardiovascular system, along with various aspects of its structure and function, including its disorders.

In order for the students to easily learn and comprehend the anatomy and physiology of the two subjects, as well as to absorb and retain the knowledge accurately and effectively reproduce the facts in their exams, the book has been written in a straightforward and understandable manner. While the physiology text is supported by tables, flowcharts, and other visual aids, the anatomy section is well-supported by a large number of straightforward colour line diagrams. The functions of the different organs and tissues are also discussed from a clinical and applied perspective, with a focus on the diseases that are linked to them.

Abbreviations

Acetylcholine (Ach)

Adenosine Triphosphate (ATP)

Atrioventricular (AV)

Autonomic Nervous System (ANS)

Blood Pressure (BP)

Calcium (Ca)

Cardiac Output (CO)

Central Nervous System (CNS)

Chloride (Cl)

Decibels (dB)

Diastolic blood pressure (DBP)

Duchene Muscular Dystrophy (DMD)

Electrocardiogram (ECG)

End Diastolic Volume (EDV)

Extracellular Fluid (ECF)

G-Protein-Coupled Receptors (GPCRs)

Heart Rate (HR)

Hematopoietic Stem Cells (HSCs)

Hemoglobin F (Fetus Hb)

Human Papillomavirus (HPV)

Interstitial Fluid (IF)

Intracellular Fluid (ICF)

Mean Arterial Blood Pressure (MABP)

Mean Arterial Pressure (MAP)

Mucosa-Associated Lymphoid Tissue (MALT)

Multiple Sclerosis (MS)

Muscular Dystrophy (MD)

Neuromuscular Junction (NMJ)

Parasympathetic Nervous System (PANS)

PEGylated (PEG)
Peripheral Nervous System (PNS)
Polyvinylpyrrolidone (PVP)
Receptor Tyrosine Kinases (RTKs)
Red Blood Cells (RBCs)
Renin-Angiotensin-Aldosterone System (RAAS)
Reticuloendothelial System (RES)
Somatic Nervous System (SNS)
Stroke Volume (SV)
Sympathetic Autonomic Nervous System (SANS).
Synaptic Vesicles (SVS)
Syntaxins and Synaptosomal-Associated Protein (SNAP)
Systolic blood pressure (SBP)
Total Peripheral Resistance (TPR)
Venous Return (VR)
Von Willebrand Factor (VWF)
White Blood Cells (WBCs)

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ABOUT THE AUTHORS



Dr. Shivshankar D. Mhaske

He is presently working as Principal at Satyajeeet College of Pharmacy, Mehkar, Dist Buldana Maharashtra, India. He is having 15 years of experience in Teaching and Research. He is recognized PhD Supervisor. He is also guiding PhD Scholars. He has also guided more than 80 students Of B. Pharm and currently involved in research on Skin Disease. He has filed 15 Patents in National and International Patent Office. He has more than 150 papers in reputed national and international Journals. He has authored chapters and Book "16 Books. He is a life member of Maharashtra State Pharmacy Council, Association of Pharmacy Teachers of India, He is an editorial board member and reviewers for many scientific journals.



Mr. Yogesh R. Joshi

He is working as a Principal in Shellino Education Society's Nanasaheb R.G. Patil Institute of Pharmacy, Mamurabad, Jalgaon. He has qualified GATE examination conducted by Indian Institute of Technology, Kanpur, in 2007. He has completed M.Pharm in Pharmacology from Sant Gadge Baba Amravati University, Amravati. He has 13 years of experience in teaching and administration. He has published research papers in various national and international journals.



Mr. Tushar A. Gaikwad

He is currently working as HOD, Assistant Professor at SDNCRES's, Late Narayandas Bhawandas Chhabada Institute of Pharmacy, Raigaon, Satara. He has completed M. Pharm in Pharmacology from Santh Gadagebaba University, Amravati. His research interest includes Herbal formulation & evaluation in Diabetes. He received 1 Indian Patent Grants (Designs) & US Patent Designs. He is reviewer & editor of many journals & publications houses. He published review as well as research papers in various UGC Care, Scopus journals. He is member of Association of Pharmacy Teachers in India.



Mr. Abhirup R. Sagare

He is working as an Assistant Professor in YSPM's Yashoda Technical Campus, Faculty of Pharmacy, Satara. He is from Pharmacology department and has 8 years of experience in Pre-Clinical studies.



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