

DEPARTMENT OF PHYSIOLOGY

Page 1: OVERVIEW/PHYSIOLOGY

Physiology is the scientific study of functioning in human body. Physiology is the foundation of all medical sciences. Our Evidence based clinical Medicine is based on Physiology. It connects science, medicine, and health, and creates a framework for understanding how the human body adapts to stresses, physical activity, and disease. This understanding enables students correlate between pathology of a disease & its treatment, contributing to the development of the core skills of a competent doctor.

Physiology department is a full-fledged department in Government Medical College, Nandurbar which conducts quiz programs and student seminars on regular basis. The department is equipped to fulfill students need and make them well trained medical professionals.

Curriculum:

As per the MUHS Nashik, available at http://www.muhs.ac.in/upload/syllabus/Phase1_060810_16082012_1233.pdf

Goal:

- 1) To provide comprehensive knowledge of organ systems of the body.
- 2) To understand physiological basis of health and diseases.

Educational Objectives:

- 1) At the end of course students will be able to describe the normal functions of all the organ systems, their regulatory mechanisms and interactions of various systems for well coordinated total body functions.
- 2) To understand the relative contribution of each organ system in homeostasis.
- 3) Explain the physiological aspect of normal growth and development.
- 4) Analyze the physiological responses and adaption to environmental stresses.
- 5) Comprehend the physiological principles, underlying pathogenesis and treatment of disease.
- 6) Correlate knowledge of physiology of human reproductive system in relation to national family welfare program.

Skills:

At the end of course students should be able to

- 1) Conduct experiments designed for study of physiological phenomenon.
- 2) Interpret experimental / investigative data.
- 3) Distinguish normal and abnormal data derived as results of tests which he/she has performed and observed in the laboratory.

Page 2: FACULTY-

Head of the Department: Dr. G. V. Thakare

Sr. No.	Name	Post	Qualification	E mail ID
1	Dr. G. V. Thakare	Professor & HOD	MBBS, MD	thakare.girish@ymail.com
2	Dr. C. D. Dange	Assistant professor	MBBS, MD	dangedcd@gmail.com
3	Dr. N.R.Gode	Assistant professor	MBBS, MD	nikhilgode@gmail.com
4	Dr Smita Gaikwad	Assistant professor	Msc PHD	Mailmesmita.patil@rediffmail.com

List of non-teaching staff:

Sr. No.	Post	Name
1	Technician	Shri J.U.Gangurde
2	Lab. Assistant	Shri H.H.Borse
3	Junior Clerk	Shri K.Fulpagare
4	Laboratory Attendant	Shri D. Patil
5	Peon	Shri. A. Chaure
6	Sweeper	Shri. R. Thakare

Page 3: Duties and Responsibilities -

Professor in physiology:

- 1) To teach UG & PG students in subject.
- 2) To take tutorial classes.
- 3) To arrange teaching program of department in consultation with Dean.
- 4) To guide & conduct research in the subject.
- 5) To be in charge as HOD.
- 6) To do any other work that may be assigned to him by Dean.

Associate Professor in physiology:

- 1) To look after the work of physiology.
- 2) To be responsible for lecture, demonstration & practical classes in the subject & any other departmental work assigned by professor & Dean.
- 3) To take part in research work & also to help professor in supervision of department work, store & verification.
- 4) To perform any other duties so may be allotted by the professor & Dean in the interest of departmental work.

Assistant professor in physiology

- 1) To assist the professor in teaching the subject.
- 2) To conduct tutorials and demonstrations.
- 3) To arrange and supervise the practical in the department.
- 4) To prepare specimens for museum tutorials, practicals etc. when required.
- 5) To assist professor in research.
- 6) To be responsible for the stores and laboratories under his charge.
- 7) To do after duties assigned by the professor or dean of the college.

Page 4: FACILITIES –

The department of physiology is well equipped and consists of following laboratories-

- 1) Haematology
- 2) Clinical physiology
- 3) Central Research Laboratory

All the laboratories are provided with adequate infrastructure and equipments to accommodate 25 students.

Equipments:

The department has all the necessary equipments as per the NMC norms.

Page 5 : RESEARCH & PUBLICATIONS –

Dr. G.V. Thakare:

- 1) Study of physical fitness of policemen in Dhule.
- 2) Resting blood pressure & cold pressor test in policemen in Dhule city. Dr. S. A. Mundewade, Dr. G. V. Thakare. International journal of basic medical science, September 2011, vol. II, issue 4.
- 3) Effect of sitting & non-sitting yoga asana on premature ejaculation. Prashant Patil, Jayant J. Kakwana, Girish V. Thakare, Sarika Patil. Inventi impact, Sex & reproduction, 2012, Vol. 2012, issue 4, 204 – 208.
- 4) Comparative study of lung function test in policemen in traffic control with those in general duty. Prashant Patil. Girish V. Thakare, Sarika Patil. National journal of physiology, pharmacy & pharmacology, 2013, 3 (2), 162 – 166.
- 5) Variability & accuracy of Sahli's method in estimation of haemoglobin concentration.

Dr. C. D. Dange:

- 1) PFTs in patients of chronic renal failure. Milestone, June 2005.

Dr. N.R.Gode:

- 1) Assessment of cognitive performance in hypertensive and Normostive Individuals in the age group of 30-40yrs. the indian practitioner Vol.66 No11 November .2013
- 2) The observational study of course of recovery of reflexes in spinal cord injury patients. Indian Journal of basic and Applied Medical Research; June 2016. Vol - 5 Issue - 3 P. 359-364
- 3) A study of perceived stress and autonomic function test in under Graduate Medical students. Applied Physiology and Anatomy Digest [P ISSN 2456 - 4095] December 2017 (2) 03. 11-20.
- 4) A cross sectional study of effects of Organophosphorous pesticides on Cardio-Respiratory parameters among farm labourers of North Maharashtra. Applied Physiology and Anatomy Digest [P ISSN 2456 - 4095] December 2019 (4) 03. 29-36.

Dr Smita Gaikwad

Sr. No.	Titles of Publication
<u>International Publications</u>	

1	To find out percentage (%) distribution of abo & rhesus (rh.) blood groups in medical students. Contempory Research in India. A Multidisiplinary international journal. Dec- 2011;1(4): 303- 305. (First Author)
2	Effect of combined slow & Fast Pranayamic Breathing Exercise on Autonomic Nervous System. International Journal of recent trends in science & technology. May- 2012; 1(8):5-8.
3	Role of Ultrasonic Bone Surgery Device (Piezosurgery) In Harvesting Intraoral Autogenous Bone Graft- A case report. International Journal of recent trends in science & technology. June 2012;3(2): 59-62.
4	Effects of short term pranayama on cardio- pulmonary efficiency in young volunteers. Biomedicine. June 2013; 33(2):237-241. (First Author)
5	To study the blood group distribution and its relationship with bleeding and clotting time in dental student. Asian Journal of Medical and Pharmaceutical Sciences. 2013;1(1):1-4. (First Author)
6	A study of pulmonary function tests in petrol pump workers. International Journal of recent trends in science & technology. April 2015; 14(3): 666 – 669.
7	Study Of Serum Levels Of Calcium In Coronary Artery Disease And Diabetes Mellitus. World Journal Of Pharmacy And Pharmaceutical Sciences. June 2015; 4(7): XXX-XXX.
8	In – Vitro Studies of lectin specific changes on Erythrocyte membrane. Asian Journal of Medical and Pharmaceutical Sciences. Dec- 2015; 2(2):728-730.
9	Patterns Of Phenotypic Resistance To The Macrolide Lincosamide Streptogramin-B Group Of Antibiotics In Pvl Positive <i>Staphylococcus Aureus</i> In Tertiary Care Hospital. Journal of International Research in Medical and Pharmaceutical Sciences. Dec. 2015; 8(2):101-105.
10	To Study The Changes In Blood Pressure Indices Before And After Pranayama Practice Among Young Volunteers. European Journal of Pharmaceutical and Medical Research. Feb 2016; 3(3):305-308. (First Author)
11	Effect Of Pranyama On Body Mass Index In Young Medical Student. International Journal of Research and Review (IJRR). February 2016: 24-27. (First Author).
12	Study of body mass index, waist hip ratio and percentage body fat in type ii diabetes mellitus. World Journal of Pharmaceutical Research. June – 2016; 5(7): 1667-1673. (First Author)
13	Comparison of Body Mass Index, Waist Hip Ratio and Percentage Body Fat in Type II Diabetes Mellitus and in control group. European Journal of Pharmaceutical and Medical Research. July 2016; 3(3): 305-308.
14	Study of levels of lipoprotein (a) in coronary artery disease and diabetes mellitus. World journal of pharmapsectual research. September 2016; 5(10):701- 708.
15	Platelet rich fibrin as a sole grafting material For the treatment of periodontal Intrabony defect. Int J Pharm Bio Sci. Oct. 2016;7(4B): 309 – 313

16	Efficacy of routine serum laboratory test in seizures of children. Research journal of pharmaceutical biological and chemical sciences November–December 2016; 7(6): 1064- 1067.
17	Dynamic Lung Function Tests in Occupationally Exposed Petrol Pump Workers of Western Maharashtra. International Journal Of Pharmaceutical Sciences research and review. Dec- 2016;41(2):34-37. (First Author)
18	Study of electrolyte concentration in petrol pump workers of western Maharashtra .World journal of pharmaceutical research. December 2016;6(2):571- 578. (First Author)
19	Study of Total cholesterol (TC), triacylglycerols (TG), High density lipoprotein cholesterol (HDL-C) in type II diabetes mellitus. Asian journal of pharmaceutical and clinical research Feb -2017; 10(2).
20	Effect of Petroleum Fumes on Cardio -Pulmonary Efficiency in Petrol Pump Workers of Western Maharashtra. Research Journal of Pharmaceutical, Biological and Chemical Sciences(RJPBCS). November–December 2017; 8(6) : 408-412. (First Author)
21	Micronuclei - As A Biomarker Of Genotoxicity In Automobile Mechanics Of Western Maharashtra. Asian journal of pharmaceutical and clinical research . August 2018; 10(2). (First Author)
<u>National Publications</u>	
22	Estimation of Body Mass Index % Body Fat & Waist hip ratio in school going children. MJDYPU Kolhapur .March 2010; 3(2): 31-36.
23	To Study The Effects Of Short Term Pranayama On Pulmonary Function Tests In Young Adults. MJDYPU Kolhapur. Sept. 2010; 4(1):7-12. (First Author)
24	Effect of Physical training on Cardio- respiratory parameters. Indian Journal of Research Paripex. July 2012; 1 (7):56-58.
25	A Role of Piezo-surgery in different fields of dentistry- Case series. MJDYPU Kolhapur. Sept. 2012; 4 (1): 69-74.
26	Study of levels of microalbuminuria in coronary artery disease and Diabetes mellitus. Journal of Pharmaceutical and Scientific Innovation. June 2015; 4(3).
27	Study of Peak Expiratory Flow Rate as the Assessment of Lung Function in Occupationally Exposed Petrol Pump Workers of Western Maharashtra. JKIMSU; 5(2):95-100. (First Author)