

## Self-Directed Learning (SDL): Video Presentation

The Department of Physiology, Arunai Medical College & Hospital, under the guidance of **Dr Jeneth Berlin Raj, Professor and Head, Department of Physiology**, conducted a Self-Directed Learning (SDL) activity for Phase I MBBS students in the form of educational video presentations. The activity was designed to encourage students to explore physiological concepts and practical aspects of Physiology through innovative and self-directed learning methods. Students were assigned to prepare short videos on various **physiological topics and practical demonstrations** included in the MBBS curriculum. They were encouraged to independently research the selected topics, develop scripts, create visual content, and present the information in a clear, accurate, and engaging manner. The videos covered **fundamental physiological concepts, mechanisms, clinical correlations, and demonstrations of physiology practicals**, helping students connect theoretical knowledge with practical applications.

The activity provided students with an opportunity to strengthen their understanding of Physiology while developing essential skills such as critical thinking, communication, teamwork, creativity, and digital literacy. Faculty members provided guidance and constructive feedback throughout the activity, supporting students in improving both the scientific content and presentation quality of their videos.

To enhance student motivation and promote self-directed learning, the Department of Physiology has initiated the practice of curating and sharing high-quality educational videos through its official YouTube channel, **"Pulse of Physiology."**

Only original or copyright-free content aligned with the MBBS curriculum is featured to ensure both academic integrity and accessibility. The channel also serves as a platform to showcase students' creative academic contributions and departmental academic events, fostering a culture of engagement and innovation in learning.

You may access the channel via the following link:  
<https://www.youtube.com/@PulseOfPhysiology>.

The video presentations reflected the students' enthusiasm, creativity, and conceptual understanding. The activity successfully promoted active participation, peer learning, and self-directed study, making the learning process more interactive and engaging. Overall, the SDL video presentation activity contributed significantly to enhancing students' academic learning and practical understanding of physiological principles.

The topics spanned a wide spectrum, including:

| S. No | Student's Name     | Topic                                   |
|-------|--------------------|-----------------------------------------|
| 1     | AADHI SHREE J      | Sliding filament theory                 |
| 2     | AASHIKA S          | Surfactant – neonatal distress syndrome |
| 3     | AATHITHYA BL       | Cardiac cycle                           |
| 4     | ABDUL RASEEN N     | Pulse Rate in Athletes                  |
| 5     | ABIJEETH KANNAN ST | Deglutition Reflex                      |
| 6     | ACME GEOSTEIN SP   | Feedback Mechanism                      |
| 7     | ADHITHYAA SJ       | Jaundice                                |
| 8     | ADHIYAMAN R        | Leukemia                                |
| 9     | ADITHYA R          | MI vs Acute pericarditis                |
| 10    | AGHIL AHMED M      | CPR                                     |

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| 11 | AISWARYA M              | Eosinophilia in hookworm infection                                       |
| 12 | AKSHAY RAJ V            | JVP                                                                      |
| 13 | AKSHITHA SA             | Air embolism                                                             |
| 14 | AMIRTHA SHREE S         | Stroke                                                                   |
| 15 | ANITHA J                | Cardiac output                                                           |
| 16 | ANUSHREE KS             | Basic Life Support                                                       |
| 17 | ARCHANA M               | Myasthenia gravis vs Lambert-Eaton syndrome                              |
| 18 | ARCHANA S               | Erythroblastosis fetalis                                                 |
| 19 | ARIVAZHAGAN P           | Fluid Homeostasis                                                        |
| 20 | ARTHI R                 | Dysbarism                                                                |
| 21 | ARUN A                  | Bronchial Asthma                                                         |
| 22 | ASHWATHI D              | Peptic ulcer                                                             |
| 23 | ATHARSH AB              | Role of dietary fibers                                                   |
| 24 | AVANTHI N               | Why does a person faint when two carotid arteries are palpated together? |
| 25 | BALA S                  | Anatomical death space                                                   |
| 26 | BARAKATHU NISHA J       | vasovagal syncope                                                        |
| 27 | BHARANI K M             | NMJ                                                                      |
| 28 | BHAVADHARANI V          | Asphyxia                                                                 |
| 29 | BHAVYA J                | Hyperventilation                                                         |
| 30 | BHAVYA SRI M            | Deglutition & Choking                                                    |
| 31 | BRINDASHRI G            | Gastric Secretion                                                        |
| 32 | CATHERINE PATRICIA A    | Frank Starling's law                                                     |
| 33 | CLEMENT SHERLY INFANT A | Varicose vein                                                            |
| 34 | DEVADHARSHINI M         | Gastric emptying                                                         |
| 35 | DEVAPRIYAN P            | Respiratory membrane                                                     |
| 36 | DHARANI K               | Hemolytic jaundice in erythroblastosis fetalis                           |
| 37 | DHARINI N D             | Polycythemia                                                             |
| 38 | DHINEESH R J            | Defence by inflammation & fever                                          |
| 39 | DHINESH KARTHI R        | Adrenal medullary hormones                                               |
| 40 | DHURGESH K              | Enterohepatic circulation                                                |
| 41 | ESTHAR V                | Neuropraxia                                                              |
| 42 | FAZIL ARSHAD MYDEEN I   | Why is haematocrit venous blood more than arterial blood                 |
| 43 | GAUTAM M J              | ECG (Abnormal)                                                           |
| 44 | GHANASREE R T           | Blood group & cross-matching                                             |
| 45 | GIRINATH R              | ECG (normal)                                                             |
| 46 | GOKUL S                 | Hemodynamic changes in standing                                          |
| 47 | GOPIKA SHRI VS          | Anticlotting Mechanism                                                   |
| 48 | HARINI PRITHIGHA A      | Anaemia                                                                  |
| 49 | HARIPRIYAN S            | Gut-Brain axis                                                           |
| 50 | HARISH KARTHI S         | Edema in heart failure                                                   |
| 51 | HARISH V                | Short-term BP regulation                                                 |
| 52 | HARISHKA M              | Drowning                                                                 |
| 53 | HASWANTH BALAJI S       | Tachycardia                                                              |
| 54 | HEMA PRIYA DHARSHINI B  | Surgical intervention in neurotrosis                                     |
| 55 | HEMAMALINI S            | Prolonged QT interval                                                    |
| 56 | HUSNA SADAF SHAMSHERI   | Heart Blocks                                                             |

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| 57  | ILAMARAN R                       | Tuberculosis                               |
| 58  | JAIDEEP S                        | Long-term Regulation of BP                 |
| 59  | JAIESH R                         | Radial pulse                               |
| 60  | JANANISRI R                      | Cyanosis                                   |
| 61  | JANARDANAN S                     | Regulation of Breathing                    |
| 62  | JANARTHANAN R                    | Achalasia cardia                           |
| 63  | JAYAADITYA PRABAHARAN            | Homeostasis                                |
| 64  | JAYASRI G                        | Hazards of blood transfusion               |
| 65  | JAYASRI V                        | AV nodal delay                             |
| 66  | JEEVENTHAN B                     | Nerve injury                               |
| 67  | JEONA JOHNSON J E                | Gastritis                                  |
| 68  | JITIN S                          | Blockers of the NMJ                        |
| 69  | JOSHITHA REDDY S                 | Clubbing Examination                       |
| 70  | KAARTHICK SANKAR K M             | Asphyxia                                   |
| 71  | KAAVYA M                         | Oxygen-dissociation curve                  |
| 72  | KALPANA CHAWLA S                 | Hazardous effects of deep-sea diving       |
| 73  | KAMALESH K                       | Addison disease                            |
| 74  | KAMALESHWARAN G                  | Bladder Dysfunction                        |
| 75  | KAMALESHWARAN S                  | Large intestine                            |
| 76  | KAVISHREE M                      | Acute pancreatitis                         |
| 77  | KEERTHANA V                      | High altitude illness                      |
| 78  | KESAVAN A                        | Bilirubin metabolism                       |
| 79  | KIRISHA S                        | Why do vaccines work for years?            |
| 80  | KIRUTHIGA R                      | Respiratory acidosis                       |
| 81  | KOPIKKA MOORTHY                  | Gall Stones                                |
| 82  | KRISH ROSHNI D                   | Acquired Immunity                          |
| 83  | KRISHITHA V                      | Neonatal jaundice                          |
| 84  | KRISHNA MURARRI LK               | Caisson's Disease                          |
| 85  | LAKSHMITVESHA C                  | Adult vs Fetal circulation                 |
| 86  | LEENA S K                        | Hypoxia                                    |
| 87  | LOKESH M A                       | Physiology of fatigue                      |
| 88  | LOGESHWARAN RS                   | Capillary circulation                      |
| 89  | MADHANAKIRUBAGAR S               | Why do smokers get breathlessness?         |
| 90  | MAMTHA SRI A                     | Excitation-Contraction Coupling            |
| 91  | MANISHA SELVAM                   | Positive feedback of parturition           |
| 92  | MANOJ B                          | Reticulocyte count                         |
| 93  | MEGHNA VARSAA RB                 | Hypovolemic Shock                          |
| 94  | MICHAELE DANIELLA<br>LINGAMDENNE | Defecation Reflex                          |
| 95  | MINARVA DEVI S                   | WBC                                        |
| 96  | MIRUTHULA S                      | Cell-mediated immunity                     |
| 97  | MOHANA KRISHNAN S                | Why does CO poisoning cause breathlessness |
| 98  | MONISHA C                        | Periodic breathing                         |
| 99  | MUKESH BALA S                    | Bp                                         |
| 100 | MUKUNTHRAJ KS                    | Homeostasis                                |
| 101 | MURSHITHA NEHAR M                | Microscope- Adjustment                     |
| 102 | NANDHINI S                       | Charging & Focusing of the chamber         |
| 103 | NAVEEN R                         | RBC                                        |

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| 104 | NAVEEN V                         | WBC                                                                      |
| 105 | NIKHITHA SRI M                   | Preparation of Smear & Staining                                          |
| 106 | NILAVAZHAHI DA                   | Identification of WBC is a stained smear                                 |
| 107 | NIVEDHITA N                      | Hb% (Shalis & other methods – Clinically relevant)                       |
| 108 | NIVETHA R                        | BT                                                                       |
| 109 | PALLAVI K                        | CT                                                                       |
| 110 | PAVITHIGA G                      | Blood Grouping                                                           |
| 111 | PAVITHRA R S                     | Pulse Recording                                                          |
| 112 | POOJA P                          | Peripheral pulse                                                         |
| 113 | POOJA SRI N                      | ECG recording                                                            |
| 114 | POORNIMA T                       | ECG Analysis (Basic)                                                     |
| 115 | PRAMIKA M                        | Ergography (Effect of load & Effect of Motivation)                       |
| 116 | PRANIKA S                        | Ergography (Venous occlusion & Arterial occlusion)                       |
| 117 | PRASANNA DEVI NJ                 | 2 <sup>nd</sup> CN- Optic Nerve (Field of vision)                        |
| 118 | PRASANTH V                       | 2 <sup>nd</sup> CN- Optic Nerve (Colour vision)                          |
| 119 | PRATEEKSHA TR                    | Visual Pathway                                                           |
| 120 | PREETHA K                        | Vital Capacity                                                           |
| 121 | PREM KUMAR S                     | PEFR                                                                     |
| 122 | PRITHIVI ROSHAN S                | Palloriness                                                              |
| 123 | PRIYAA DHARSANA VS               | Icterus (Jaundice)                                                       |
| 124 | PRIYADHARSHINI A                 | Percussion of RS                                                         |
| 125 | PURVIKA DS                       | Oedema                                                                   |
| 126 | PUSHPARAJ B                      | Lymphadenopathy                                                          |
| 127 | RAAGA SRI LOGANATHAN<br>SASIKALA | Shape of Trachea (Palpation)                                             |
| 128 | RAHUL R                          | Apical impulse                                                           |
| 129 | RAJIYA SRI P                     | Pavlov's Experiment                                                      |
| 130 | RAKSHANAA M                      | Movement & Measurement of chest expansion                                |
| 131 | RAKSHITHA M                      | Vocal fremitus                                                           |
| 132 | RAMYA PRIYAN                     | Auscultation (Breath Sounds)                                             |
| 133 | RAMYA SHREE T                    | CVS- Thrill & Parasternal Heave                                          |
| 134 | RANJITH R                        | CVS- Auscultatory Areas                                                  |
| 135 | RICHARD JEFFREY J                | Murmurs                                                                  |
| 136 | RITHANYA S                       | Measurement of BP (Palpatory & Auscultatory)                             |
| 137 | RITHIKA S                        | Effect of Exercise on BP                                                 |
| 138 | RITISH J M                       | Effect of posture on BP                                                  |
| 139 | ROSHINI A                        | Abdomen- liver palpation                                                 |
| 140 | RUBA DHARSHINI P                 | Abdomen- kidney palpation                                                |
| 141 | SABARITHASAN K                   | 8 <sup>th</sup> CN- Vestibulo-cochlear Nerve (vestibular cochlear nerve) |
| 142 | SAI VENKATA RANGA S              | Tactile sensation- Fine, Crude Touch,                                    |
| 143 | SAIVARSHINI K                    | Tactile localisation, Two-point discrimination                           |
| 144 | SANDHIYA B                       | Sense of Position                                                        |
| 145 | SANDHIYA V                       | Vibration Sense                                                          |
| 146 | SANGAVI N                        | Pain sensation                                                           |
| 147 | SELVARATHNAM<br>SIVAKUMAR        | Thermal sense                                                            |
| 148 | SELVIN V                         | Stereognosis                                                             |

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| 149 | SHASHANK T                 | Bulk of the Muscle, tone                                         |
| 150 | SHIVANI A                  | Power of muscles (Upper limb Muscles)                            |
| 151 | SHIVANI R                  | Power of muscles (Trunk)                                         |
| 152 | SHOBANAPRIYA TE            | Power of muscles (Lower limb muscles)                            |
| 153 | SHOBANKUMAR S              | Gait                                                             |
| 154 | SHREE NIVETHA              | Conjunctival reflex                                              |
| 155 | SHRUTHIKA S                | Corneal reflex                                                   |
| 156 | SIVARAJ M                  | Light reflex a. Direct b. Indirect                               |
| 157 | SIVASUBRAMANIAN K          | Accommodation reflex                                             |
| 158 | SREKUMARAN R T             | Plantar reflex                                                   |
| 159 | SRI BHAVYA R               | Biceps jerk                                                      |
| 160 | SRIMADHI D                 | Triceps jerk                                                     |
| 161 | SRIMATHI A                 | Supinator jerk                                                   |
| 162 | SUBASRI A                  | Knee jerk                                                        |
| 163 | SUBINITHYA S               | Ankle jerk                                                       |
| 164 | SUDHARSHAN V               | Abdominal reflex                                                 |
| 165 | SUDHARSHANAA<br>MANIKANDAN | CFT- Upper limb                                                  |
| 166 | SUGESH M                   | CFT- Lower limb                                                  |
| 167 | SUKANYA M                  | Romberg's Sign (Sensory & Cerebral ataxia)                       |
| 168 | SUNDARI KT                 | 1 <sup>st</sup> CN- Olfactory Nerve                              |
| 169 | SWATHI R                   | 2 <sup>nd</sup> CN- Optic Nerve (Visual acuity)                  |
| 170 | SWETHA K S                 | 3,4, & 6 CN- Oculomotor, Trochlear & abducent Nerves             |
| 171 | SWETHIKAA K                | 5 <sup>th</sup> CN- Trigeminal Nerve                             |
| 172 | TAMILMULLAI P K            | 7 <sup>th</sup> CN- Facial Nerve                                 |
| 173 | TAMILSELVAN R              | 8 <sup>th</sup> CN- Vestibulo-cochlear Nerve (Cochlear division) |
| 174 | TARUNIKA A                 | 9 <sup>th</sup> CN- Glossopharyngeal                             |
| 175 | THAARIKA NK                | 10 <sup>th</sup> CN- Vagus Nerve                                 |
| 176 | THANUSHRI A                | Hypercapnia                                                      |
| 177 | THARINI S                  | 11 <sup>th</sup> CN- Spinal Accessory Nerve                      |
| 178 | THARUN KUMAR M             | 12 <sup>th</sup> CN- Hypoglossal Nerve                           |
| 179 | THARUN S                   | Parkinson disease                                                |
| 180 | THEJESVAR D                | Acid-Base Homeostasis                                            |
| 181 | THENMOZHI J                | Neuroplasticity- The Brain that Changes                          |
| 182 | TOSHANI P                  | GFR                                                              |
| 183 | UDHAYANITHI S              | Endogenous pain control mechanisms                               |
| 184 | VAISHEAK V                 | Vestibular Apparatus                                             |
| 185 | VAISHNAVI K                | Pheochromocytoma                                                 |
| 186 | VARSHINI M M A             | Parkinson's Disease                                              |
| 187 | VARSHINI S                 | Transgender                                                      |
| 188 | VENKATESH VARSHAN S        | Local Hormones                                                   |
| 189 | VIJAYA SHREE S A           | Amniocentesis                                                    |
| 190 | VIKAS L                    | Gigantism                                                        |
| 191 | VIKASHINI N B              | Diabetes Mellites                                                |
| 192 | VISHAALI J                 | Pain pathway                                                     |
| 193 | VISHNU S                   | Cortical Mapping                                                 |
| 194 | VISHNU VILASHINI B         | Brain death                                                      |

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|-----|---------------------------|--------------------------------------------------|
| 195 | VIVEKA SRI AT             | Referred Pain                                    |
| 196 | YAZHINI<br>CHANDRASEKARAN | Reflex arc                                       |
| 197 | YOGEAS P                  | Transport maximum of glucose and renal threshold |
| 198 | YOGESHWARI S              | Tubuloglomerular feedback                        |
| 199 | YOGITA SHRI REDDY J       | Paradoxical Sleep                                |
| 200 | YOHITHA SUNDARRAJ         | Sleep Disorders                                  |
| 203 | AMARAVATHI                | Guillain-Barré's syndrome                        |

