**Intensive Care Exam Topics**

Master’s study programme, General Medicine, Medical Faculty, Masaryk University Brno

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| **CPR** | |
| A. | **Basic Life Support** (BLS). **Foreign Body Airway Obstruction** **Algorithm** (FBAO) |
| B. | **Defibrillation** (Principles, indications). **BLS + AED algorithm** (Automatic External Defibrillator) |
| C. | **Airway management** |
| D. | **Advanced Life Support Algorithm** (ALS) |
| E. | **ALS - Bradycardia Algorithm** |
| F. | **ALS - Tachycardia Algorithm** |
| G. | **Drugs for ALS** (Indication, dosing, routes of drug administration). **Post-resuscitation Care** |
| H. | **Reversible causes of cardiac arrest - 4H & 4 T** (management during ALS). **PEA** (Pulseless Electrical Activity) |

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| **Clinical Situations** | |
| 1. | **Respiratory Failure** (Background, classification)**. Oxygen Therapy** (Equipment, indication, specific situation (COPD, ACS)) |
| 2. | **Principles of Artificial Ventilation** (Invasive+Non-invasive) |
| 3. | **ARDS** (Oxygenation Failure) |
| 4. | **Severe COPD a asthma** (Ventilatory Failure) |
| 5. | **Circulatory Failure – Shock** (Definition, types, management and monitoring) |
| 6. | **Vasoactive** drugs (vasopressors, inotropes). Fluid Therapy (Crystalloids, Colloids) |
| 7. | **Arrhythmias in ICU** (Diagnostics, drugs, cardioversion, cardiac pacing) |
| 8. | **Acute Heart Failure. Cardiogenic Shock** |
| 9. | **Sepsis. Septic Shock** |
| 10. | **Anaphylactic Shock. Obstructive Shock** (Massive Pulmonary Embolism) |
| 11. | **Hemorrhagic Shock** (Blood Products Therapy). **Massive Bleeding** (Life-Threatening Hemorrhage) |
| 12. | **Disorders** **of Consciousness** (Definition, differential diagnostics, management). **Seizures** |
| 13. | **Acid-Base Disorders** (Approach, definitions, simple disorders, therapy). **Electrolytes** **Disorders** (Hyperkalemia, hypo- and hypernatremia) |
| 14. | **Nutrition in Intensive Care** |
| 15. | **Acute Renal Failure -Acute Kidney Injury** (Renal Replacement Therapy (IHD x CRRT)) |
| 16. | **Acute Liver Failure** (Approach, differential diagnostics and management) |
| 17. | **Hospital Acquired Infection** (Definition). Principles of **ABX** (Antibiotics) treatment in Intensive Care |
| 18. | **Severe Brain Trauma** (Brain edema, Intracranial Hypertension, Donor Program -principles) |
| 19. | **Severe Trauma-Polytrauma** (Approach and management) |
| 20. | **Poisoning** (General approach, eliminations, antidotes**). Alcohols, CO and Acetaminophen poisoning** |