Important parameters in Physiology

Cellular physiology:

Body water content

Blood volume

Plasma volume

Extracellular fluid volume

Intracellular fluid volume

Interstitial fluid volume

Hematocrit

Hemoglobin concentration

Blood plasma Na^+ concentration

Blood plasma H^+ concentration

Blood plasma K^+ concentration

Blood plasma Ca^{2+} concentration and its fractions

Blood plasma Cl^- concentration

Blood plasma HCO_3^- concentration

Blood plasma protein concentration

Intracellular Na^+ concentration

Extracellular Na^+ concentration

Intracellular H^+ concentration

Intracellular K^+ concentration

Cytosolic Ca^{2+} concentration

Intracellular Cl^- concentration

Intracellular HCO_3^- concentration

Blood plasma osmolarity and oncotic pressure

Resting membrane potential of skeletal muscle cells

Resting membrane potential of neurons

Conduction velocity of different type of nerves

Equilibrium potential of Na^+ in neurons

Equilibrium potential of K^+ in neurons

Equilibrium potential of Ca^{2+} in neurons

Equilibrium potential of Cl^- in neurons

Cardiovascular system:

Duration of PQ interval of ECG (HR=75/min)

Duration of QRS complex of ECG (HR=75/min)

Duration of P wave of ECG (HR=75/min)

Amplitude of ST-segment of ECG

Amplitude of R and T waves of ECG in II. lead

Duration of cardiac cycle (HR=75/min)

Duration of systole (HR=75/min)

Duration of diastole (HR=75/min)

Duration of ventricular ejection (HR=75/min)

Duration of ventricular filling (HR=75/min)

Stroke volume

Systolic pressure in the aorta

Diastolic pressure in the aorta

Systolic pressure in the right ventricle

Diastolic pressure in the right ventricle

Systolic pressure in the left ventricle

Diastolic pressure in the left ventricle

Systolic pressure in the a. pulmonalis

Diastolic pressure in the a. pulmonalis

Central venous pressure

Blood flow of kidney

Blood flow of splanchnic area

Blood flow of brain

Blood flow of heart

Blood flow of skin

Blood flow of skeletal muscles

Cerebrospinal fluid volume

Protein concentration of cerebrospinal fluid

Hydrostatic pressure of capillaries in the arteriolar end and in the venular end

Effective filtration pressure of capillaries in the arteriolar end and in the venular end

Oxygen consumption in 1 minute

$AVDO_2$ in the systemic circulation

$AVDO_2$ in the kidney

$AVDO_2$ in the splanchnic area

$AVDO_2$ in the brain

$AVDO_2$ in the heart in resting condition and during physical exercise

$AVDO_2$ in the skin

$AVDO_2$ in the skeletal muscles in resting condition and during physical exercise

Respiratory system:

Residual volume

Expiratory reserve volume

Inspiratory reserve volume

Tidal volume

Vital capacity

Total lung capacity

Functional residual capacity

Dead space

Alveolar ventilation

Intrapleural pressure and alveolar pressure during inspiration

Intrapleural pressure and alveolar pressure during expiration

Intrapleural pressure and alveolar pressure at the end of inspiration

Intrapleural pressure and alveolar pressure at the end of expiration

P_{O2} and P_{CO2} of the alveolar gas

P_{O2} and P_{CO2} in the arteries

P_{O2} and P_{CO2} in the veins

Concentration of oxygen in the arteries and in the veins

O_2 consumption in resting condition

CO_2 production in resting condition

Urinary system:

Renal blood flow

Renal plasma flow

Glomerular filtration rate

Filtration fraction

Hydrostatic and colloid osmotic pressures in the glomerular capillaries (afferent and efferent sides)

Hydrostatic and colloid osmotic pressures in the Bowman's space

Effective filtration pressure in the glomerular capillaries (afferent and efferent sides)

Osmotic concentration in the proximal tubule

Osmotic concentration of the interstitium in the cortex

Urine volume (maximal concentration)

Urine osmolarity (maximal concentration)

Urine volume (maximal dilution)

Urine osmolarity (maximal dilution)

Osmotic concentration and composition of the interstitium in the inner medulla during maximal concentration

Transport maximum of tubular glucose-reabsorbtion

Acid-Base Balance:

Arterial blood pH and pCO_2

Buffer base

Base excess

Standard HCO_3^-

Actual HCO_3^-

Gastrointestinal tract:

Pressure values in the different parts of the esophagus

Peak acid output in males and females

Blood:

Red blood cell count

White blood cell count

Thrombocyte count

Percentage of different white blood cell types

Endocrinology:

Total and ionic Ca^{2+} concentration in the plasma

Basal glucose level in the plasma

Basal Metabolic Rate

Respiratory Quotient (carbohydrate, fat, protein)

Energy content of different foods (carbohydrate, fat, protein)

Nervous system:

EEG: α-wave frequency; β-wave frequency

Refractive power of cornea and lens