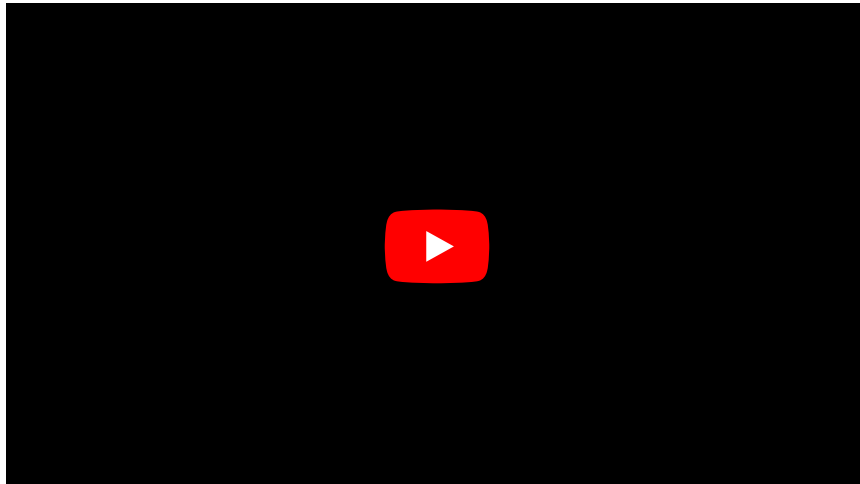


Respiratory acidosis

RAC:



- We distinguish between acute and chronic;
- imbalance between CO₂ production by tissues and its excretion
- we create 13,000-15,000 mmol per day.

Acute respiratory acidosis

- Hypercapnia, always accompanied by hypoxemia and lactic acidosis;
- respiratory distress, restlessness, tachypnoea, dyspnoea, up to stupor and coma .

Causes

- Airway obstruction
- neuromuscular causes (strain damage, respiratory depression, myasthenia, botulism, tetanus ,...);
- respiratory reduction - pneumothorax, hemothorax, pneumonia ,...;
- circulatory disorders - embolism;
- poorly performed artificial respiration.

Chronic respiratory acidosis

- Chronic reduction in effective alveolar ventilation;
- renal compensation occurs - Na⁺ and HCO₃⁻ - retention, Cl⁻ - is increasingly excreted;
- erythrocyte count increases, Hb increases;
- hypercapnia initially stimulates the respiratory center, at pCO₂ above 9 kPa - attenuation - as stimulation at that moment is mainly hypoxemia → do not give pure oxygen!!!

Causes

- COPD;
- chronic sedative overdose;
- primary alveolar hypoventilation;
- Pickwick syndrome;
- neuromuscular impairment;
- anatomical deformity of the chest - kyphoscoliosis ,...;
- terminal stages of pulmonary fibrosis.

Links

Related articles

- Parameters of acid-base balance
- Mechanism of maintaining acid-base balance
- Laboratory examination of acid-base balance
- Disorders of acid-base balance

- Metabolic acidosis
- Metabolic alkalosis
- Respiratory alkalosis
- Combined disorders of acid-base balance
- Correction and compensation of acid-base imbalances
- Principles of treatment of acid-base balance disorders
- Relationships between acid-base balance and ionogram

References

- SCHNEIDERKA, Petr, et al. *Chapters from clinical biochemistry*. 2nd edition. Prague: Karolinum, 2004. ISBN 80-246-0678-X .

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