Chloride (Cl^-)

- Helps maintain fluid balance and is a component of gastric acid (HCl).
- Assists in maintaining electrical neutrality in body fluids.

Chloride is an anion that is primarily located in the extracellular fluid. The regulation of serum chloride levels is mainly managed by the kidneys. A significant portion of chloride that is filtered through the glomerulus is reabsorbed in both the proximal and distal tubules, with the proximal tubule being the primary site of reabsorption, utilizing both active and passive transport mechanisms. Hyperchloremia may arise from the loss of bicarbonate through the gastrointestinal tract. Conversely, hypochloremia can manifest as a result of gastrointestinal losses, such as vomiting, or from excessive fluid retention, as seen in conditions like congestive heart failure.[1]

References

1. Morrison G. Serum Chloride. In: Walker HK, Hall WD, Hurst JW, editors. Clinical Methods: The History, Physical, and Laboratory Examinations. 3rd ed. Butterworths; Boston: 1990.