

# Electrolyte Physiology in Physical Exercise

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## ABSTRACT

*Physical activity causes various changes in the body's regulatory system, these changes are influenced by the type, frequency, duration, and intensity of the exercise. One of the changes is sweating to regulate body temperature. The fluid that comes out through sweat contains water and electrolytes such as sodium and potassium which are important for body metabolism. Electrolyte balance affects fluid balance and cell function. When exercise, increased sodium can occur due to a deficit in body fluids due to water excretion that far exceeds sodium excretion and insufficient water intake. The increase in serum potassium levels occurs due to the transfer of potassium from the intracellular fluid (CIS) to the extracellular fluid (CES), which is then excreted together with sweat as a result of increased body heat. The increase in serum calcium levels after physical activity is caused by the activation of the body's homeostasis mechanism to maintain normal serum calcium levels as an essential substance in the process of muscle contraction. There is also a temporary transfer of magnesium from the extracellular fluid to the skeletal muscle tissue so that the amount of magnesium contained in the skeletal muscle increases while the plasma magnesium concentration decreases. Changes in electrolyte levels due to physical exercise are influenced by the type, duration, and intensity of exercise performed. so that the amount of magnesium contained in skeletal muscle becomes more while the plasma magnesium concentration decreases. Changes in electrolyte levels due to physical exercise are influenced by the type, duration, and intensity of exercise performed. so that the amount of magnesium contained in skeletal muscle becomes more while the plasma magnesium concentration decreases. Changes in electrolyte levels due to physical exercise are influenced by the type, duration, and intensity of exercise.*

**Key Words:** *electrolytes, exercise, physiology*