

Hypokalemia is a metabolic imbalance characterized by extremely low potassium levels in the blood. It is a symptom of another disease or condition, or a side effect of diuretic drugs. The body needs potassium for the contraction of muscles (including the heart), and for the functioning of many complicated proteins (enzymes). Potassium is found primarily in the skeletal muscle and bone, and participates with sodium to contribute to the normal flow of body fluids between the cells in the body. The normal concentration of potassium in the body is regulated by the kidneys through the excretion of urine. When the kidneys are functioning normally, the amount of potassium in the diet is sufficient for use by the body and the excess is usually excreted through urine and sweat. Body chemicals and hormones such as aldosterone also regulate potassium balance. Secretion of the hormone insulin, which is normally stimulated by food, prevents a temporary diet-induced Hypokalemia by increasing cell absorption of potassium. When Hypokalemia occurs, there is an imbalance resulting from a dysfunction in this normal process, or the rapid loss of urine or sweat without replacement of sufficient potassium. Hypokalemia may affect both males and females. However, it occurs more commonly in females. The underlying cause of Hypokalemia must first be treated. When the hypokalemia is severe, potassium chloride may be administered orally or intravenously. Treatment must be carefully monitored by a physician. Any associated acid-base disorders or hormonal disturbances must be evaluated before treatment is planned. The administration of potassium and potassium- sparing diuretics is usually discouraged in patients with kidney disease, diabetes mellitus, or dysfunctions of the autonomic nervous system. The imbalance of external and internal potassium levels in these individuals may predispose them to life-threatening degrees of Hyperkalemia (too much potassium). Hypokalemia in individuals with high blood pressure taking diuretics may be improved by replacing lost potassium in the diet through certain fruits or potassium drugs. Hypokalemia may also be minimized by dietary restriction of salt since high rates of sodium excretion promote urinary potassium losses. People who participate in vigorous sports or exercise in warm weather should be sure to replace potassium that is lost through excessive sweating. This can be accomplished through dietary planning.