

# [A brief description of aldosterone](https://assignbuster.com/a-brief-description-of-aldosterone/)

The body’s adrenal gland is responsible for the secretion of the steroid hormone aldosterone. The latter’s main function is to regulate and balance water and salt in the human system (otherwise known as the electrolyte metabolism of the body). As an extremely potent hormone, aldosterone promotes sodium retention and enhances potassium excretion in the system. The hormone also helps regulate blood pressure and bodily fluids; hence if the aldosterone levels are low or too high, symptoms can result.

Aldosterone directly acts on the kidneys’ tubules and controls their reabsorption of more sodium and water from the urine. Secretion of potassium in the tubule replaces the sodium, which is then reabsorbed. Another function of the hormone is to operate on a person’s central nervous system to influence the increase of a person’s appetite for salt and their thirst. Aldosterone secretion is the result of two different bodily mechanisms. It is hypothesized that if sodium concentrates in the system are severely limited, it may cause increased rates of aldosterone.

Another theory is that reduced blood flow to the kidney engages it to release the enzyme rennin which then converts inactive globulin in the blood. Other than these, studies showed that the hormone may have other target cells than originally remarked on. The editors of the Kidney International Journal in 2000 (Farman and Verrey) commented on Dr. Haim Garty’sobservationthat there is " Aldosterone action in non-epithelial cells. " Hence it is seen that aside from the kidneys, the hormone is also linked to the central nervous and cardiovascular systems as well as various membrane lipids.

Amplified levels of aldosterone secretion often cause salt retention which in turn results in edema. Extremely high levels of the hormone can result to high blood pressure, muscle cramps and over-all fatigue. On the other hand, low levels may be an indicator ofdiabetes. It is proven that the variation of the hormone levels are influenced by the person’s sex as well as the amount of sodium consumed in his or her daily diet. Pregnancy may lead to higher levels of aldosterone in women. Other symptoms of higher than normal levels of aldosterone may also result to primary or secondary hyperaldosteronism.

Primary hyperaldosteronism is considered as a rare syndrome caused by an abnormality in the adrenal gland. More often than not, the gland is affected by a benign tumor and this often transpires between t hags of 30 and 50 years old. Secondary hyperaldosteronism is generally related to high blood pressure and other disorders such as cardiacfailure, cirrhosis of the liver and nephritic syndrome. Various mechanisms affect the disease and causes the imbalance of the hormone’s levels in the human system.

Another extremely rare disease linked to aldosterone is the Barrter syndrome which also affects the kidneys. Patients diagnosed with the Barrter Syndrome experiences loss of potassium and an increase in aldosterone. This results to potassium wasting where the kidneys remove far too much necessary potassium from the body. Incidentally, there are tests to check the aldosterone levels in the body. It is often don concurrently with other blood tests or provocative tests to determine over or under production of the hormone.