


## Module 4:Hormone-Behaviour Relationship

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## Module 4:Hormone-Behaviour Relationship

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## Parathyroid gland

See video on web

Parathyroid hormone (PTH) is secreted by the parathyroid gland. PTH facilitates increased calcium ion concentration in blood. It is responsible for calcium and phosphate distribution in the body, thus facilitating growth of bones and muscles. Hyperparathyroidism results into demineralization of bone and formation of stones in the urinary tract. This can result into osteoporosis in females. On the other hand, hypoparathyroidism is characterized by decreased plasma calcium levels that lead to muscle tetany. Low calcium level may also cause cramps.

PTH is extremely important from the psychological viewpoint too. Hyperparathyroidism has been associated with psychiatric symptoms. The disturbed calcium balance with hypercalcemia in hyperparathyroidism is associated with anxiety disorder. Disturbance in the magnesium level with hypomagnesemia is also evident with hyperparathyroidism, and is associated with delirium with psychosis. On the other hand, half of those with hypoparathyroidism exhibit psychiatric symptoms. Cognitive impairment, depression and anxiety are the most frequently observed symptoms. Emotional changes have also been observed in cases with hypocalcaemia due to parathyroid insufficiency. Several studies have reported age-induced increase in parathyroid hormone and its association with cognitive decline and dementia.

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