

## Calcium and Parathyroid Disease

The parathyroid glands are four small glands located in the thyroid gland which lies by the larynx at the front of the neck. The parathyroid glands regulate calcium level in the blood and calcium deposition in the bone. Hyperparathyroidism is an increase in parathyroid hormone (PTH) secretion and results in a high blood calcium level. Hypoparathyroidism is a decrease in PTH and causes low blood calcium.

Primary hyperparathyroidism (PHPT) is caused by excessive secretion of parathyroid hormone from one or more parathyroid glands. 85% of cases are due to a small benign parathyroid adenoma. The remaining cases are due to multiglandular disease (called parathyroid hyperplasia) or to malignancy. Most hyperparathyroidism is diagnosed in asymptomatic people by an incidental finding of elevated serum calcium. Most persons with PHPT have an elevated parathyroid hormone (PTH). Parathyroid related symptoms include osteoporosis (bone thinning), kidney stones, peptic ulcer, mental changes (fatigue, depression, confusion), loss of appetite, nausea, vomiting, constipation, EKG changes and arrhythmias. Surgery is the usual treatment but carries with it the risk of damage to the recurrent laryngeal nerve. Recurrence occurs in a small percentage of patients. Secondary hyperparathyroidism is characterized by an elevated PTH and a low or low-normal serum calcium. The most common cause is chronic renal failure. Other causes are vitamin D deficiency and renal hypercalciuria.

Hypoparathyroidism is usually due to accidental removal of the parathyroid glands during thyroid surgery or removal of too much parathyroid tissue during surgery for hyperparathyroidism. It is characterized by low serum calcium levels and increased levels of blood phosphorus (hyperphosphatemia). Symptoms can range from mild tingling in the hands, fingers, and lips to more severe forms of muscle cramps, including cramping of the entire body and convulsions.

**If your client has Parathyroid Disease, please answer the following:**

**1. Please list date of diagnosis:**

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**2. Was the parathyroid disease diagnosed as:**

Hyperparathyroidism	yes	no
Hypoparathyroidism	yes	no

**3. Was surgery performed?**    yes    no

If yes, please indicate date

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**4. Is your client on any medications?**

If yes, please give details

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**5. Please check if your client has had any of the following:**

osteoporosis	yes	no
kidney disease	yes	no
kidney stones	yes	no
depression	yes	no
arrhythmia	yes	no
cancer	yes	no

**6. Please provide date and value of your client's latest calcium level:**

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**7. Has your client smoked cigarettes or any other form of tobacco in the last 5 years?**

If yes please give details \_\_\_\_\_