



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.

Underwriting parathyroid disease:

Primary hyperparathyroidism, present	
Calcium level < 1 mg/dl above laboratory normal (<i>LabOne 8.5-10.5 mg/dl</i>), no surgery recommended	0
Calcium level 1-1.6 mg/dl above laboratory normal (<i>LabOne 8.5-10.5 mg/dl</i>), no surgery recommended	Table C
Calcium level > 1.6 mg/dl above laboratory normal (<i>LabOne 8.5-10.5</i>) or surgery recommended	Decline
Primary hyperparathyroidism, history, calcium level normal	0

Secondary hyperparathyroidism	
Cause known	Rate for cause
Cause unknown	Individual consideration

Hypoparathyroidism	
Normal calcium level	0
Abnormal calcium level	Decline

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Calcium and Parathyroid Disease - Ask "Rx" pert underwriter
(ask our experts)

Producer _____ Phone _____ FAX _____
Client _____ Age/DOB _____ Sex _____

If your client has parathyroid disease, please answer the following:

1. Please list date of diagnosis: _____

2. Was the parathyroid disease diagnosed as:

Hyperparathyroidism yes no
Hypoparathyroidism yes no

3. Was surgery performed? yes no

If yes, please indicate date _____

4. Is your client on any medications?

yes, please give details _____
 no

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: _____

7. Has your client smoked cigarettes in the last 12 months?

yes
 no

After reading the *Rx for Success* on Calcium and Parathyroid Disease, please feel free to use this Ask "Rx" pert underwriter for an informal quote.

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