

Health Awareness



What Happens When Your Body Can't Regulate Calcium?

(NAPSA)—Calcium is important for the development of strong bones and teeth.¹ But it also plays a role in other important functions in the body. For instance, calcium helps blood to clot and supports nerve function, as well as muscle contractions, releasing hormones, and maintaining a normal heart-beat.² If the body is unable to maintain the necessary levels of calcium in the blood (serum calcium), the consequences can be serious or even life-threatening.³

The parathyroid glands are small nodules located near the thyroid that produce parathyroid hormone, or PTH.⁴ This hormone regulates calcium and phosphorus levels in the blood.⁵ When levels of PTH are too low, it can lead to low levels of calcium and high levels of phosphate in the blood. In turn, this can cause a range of persistent physical, emotional and cognitive symptoms.⁶

Hypoparathyroidism

A rare disease called Hypoparathyroidism is characterized by low or absent endogenous PTH with low levels of calcium in the



With a doctor's help, hypoparathyroidism can often be managed.

blood.⁵ Hypoparathyroidism can affect someone at any age,⁶ and an estimated 70,000 patients in the United States are living with the chronic disorder.⁶ Hypoparathyroidism most often occurs following surgery such as a thyroidectomy, a common procedure for patients with thyroid cancer during which all or most of the thyroid gland is removed.^{7,8} Less commonly, Hypoparathyroidism can

also be caused by some autoimmune disorders, genetic risk factors, increased levels of iron, copper, or iodine in the parathyroid glands, or may simply be undetermined.⁷ More females appear to be diagnosed with hypoparathyroidism relative to males, with a 3:1 predilection.⁶

How is Hypoparathyroidism diagnosed?

Hypoparathyroidism can be diagnosed based on the identification of a patient's symptoms by conducting a review of a patient's medical history, a thorough physical exam, and specific laboratory tests. In some cases, genetic testing can be used to confirm a diagnosis.⁵

How is Hypoparathyroidism treated?

Symptoms of hypoparathyroidism are often managed with oral calcium and active vitamin D to raise calcium levels in the blood.⁹ For more information about available treatments for hypoparathyroidism, patients should consult their health care practitioner or endocrinologist.

1. Calcium Fact Sheet for Consumers. National Institute of Health Office of Dietary Supplements. 19 March 2013. <<http://ods.od.nih.gov/factsheets/Calcium-Consumer/>>.

2. NIH Medline, Calcium in diet, Function. Available at: <http://www.nlm.nih.gov/medlineplus/ency/article/002412.htm> Accessed Nov. 11, 2014.

3. Shoback D. Hypoparathyroidism. *N Engl J Med.* 2008;359(4):391-403.

4. Hall, George M., et al. "Parathyroid Disease." *Core Topics in Endocrinology in Anaesthesia and Critical Care.* Cambridge: Cambridge UP, 2010. Print.

5. NORD. Hypoparathyroidism. Retrieved from <https://www.rarediseases.org/rare-disease-information/rare-diseases/byID/703/viewFullReport>. Last accessed August 14, 2014.

6. Powers et al. Prevalence and Incidence of Hypoparathyroidism in the USA Using a Large Claims Database. *J Bone Miner Res.* 2013 DOI 10.1002/jbmr.2004, p. 2.

7. Bilezikian JP, Khan A, Potts JT Jr, et al. Hypoparathyroidism in the adult: epidemiology, diagnosis, pathophysiology, target-organ involvement, treatment, and challenges for future research. *J Bone Miner Res.* 2011;26(10):2317-2337

8. American Cancer Society, Thyroid Cancer – Detailed Guide. Retrieved from <http://www.cancer.org/acs/groups/cid/documents/webcontent/003144-pdf.pdf>. Last accessed Sept 16, 2015.

9. Haaker N, et al. Understanding the Burden of Illness Associated with Hypoparathyroidism Reported among Patients in the Paradox Study. *Endocr Pract.* 2014 Jan 21:1-35. [Epub ahead of print].

© 2015 Shire.