

## Information on Parathyroidectomy

**The Parathyroid Glands:** Most people have 4 parathyroid glands that rest adjacent to the thyroid gland or in the gland itself. These are the size of a pea. Parathyroid glands help maintain a normal level of calcium in your body. Occasionally, one or more of the glands may secrete an excessive amount of Parathyroid Hormone (PTH). The excessive PTH can cause early bone resorption and kidney stones. The majority of the time, only one gland needs to be removed. Other times, 3-4 glands may be removed to achieve a lowering of the PTH level. Sometimes gland tissue is transplanted into adjacent tissue in the neck or forearm (parathyroid autotransplantation) in an effort to maintain normal PTH levels in the future. This transplanted tissue may take a few months to work properly. Some patients may need to take a synthetic Vitamin D and calcium supplement after surgery. Calcium levels may be monitored after surgery by your primary doctor or endocrinologist. A few percent of cases have either 5 glands or a gland is in a very unusual location. A second operation is sometimes needed to find these glands.

**The Thyroid Gland:** The thyroid gland is shaped like a bow tie; i.e. a larger lobe on each side of your windpipe (trachea) joined by a narrower isthmus. The thyroid gland commonly develops nodules that may resemble a parathyroid gland. The thyroid gland secretes thyroid hormone that is essential for the body. Sometimes an abnormal parathyroid gland is inside of a thyroid lobe or otherwise difficult to separate from the lobe. In these cases, one or both thyroid lobes are removed during surgery. Many of these patients will need to take a thyroid hormone supplement after surgery. Thyroid hormone levels are usually monitored annually by your primary care doctor or endocrinologist.

**The Recurrent Laryngeal Nerve:** The Recurrent Laryngeal nerve controls the majority of the voicebox (larynx) and runs adjacent to the thyroid gland. The nerve may not function well after surgery. This would lead to a hoarse, breathy voice and sometimes trouble swallowing. Most mild hoarseness after surgery is due to swelling of the vocal cords from the breathing tube (endotracheal tube) placed by the anesthesiologist during the surgery. If surgery requires both lobes to be removed, the left and/or right recurrent laryngeal nerves may not work, and the patient may have trouble breathing. This is rare but may require a breathing tube to be placed through the skin and below the voice box (TRACHEOTOMY).

**Parathyroidectomy:** The removal of a parathyroid gland starts with a skin incision in the lower neck, above the patient's breastbone. The abnormal gland is searched for carefully. This may require dissection of and around the recurrent laryngeal nerve. Lymph nodes and thyroid nodules may resemble parathyroid glands, and thus slow the dissection. Both sides of the neck may need to be explored. One or both of the lobes of the thyroid may be removed. The goal is to reduce the preoperative PTH level to < 50% of the preoperative value.

Sometimes residual parathyroid tissue is transplanted into adjacent neck tissue or a distant site such as the forearm. A small drain tube may be placed to exit the skin near the incision. The final pathology report may not be available until one week after surgery.

**Questions:** Ask your surgeon if you have other questions or concerns.