

## Thyroidectomy/Parathyroidectomy

### Site Applicability

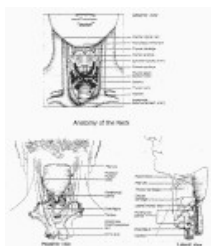
VGH

### Practice Level

RN

### Need to Know

The thyroid gland is a highly vascular organ consisting of 2 lobes. The lobes lie at the front of the neck, below the larynx and beside the trachea (see diagram). The primary function of the thyroid gland is to secrete hormones which regulate growth and development, control lipid and carbohydrate metabolism, and stimulate the consumption of oxygen by most of the body's cells.



Anatomy of Neck

[\(click to enlarge\)](#)

Thyroid surgery may include any of the following:

- total thyroidectomy (usually for malignancy)
- subtotal thyroidectomy (posterior portions of each lobe remain; an alternative to prolonged medical treatment for hyperthyroidism)
- thyroid lobectomy (removal of one lobe)

**Thyroid storm**, though uncommon, may occur related to a sudden excessive release of thyroid hormones into the circulation. It commonly appears intraoperatively, but may occur up to 18 hours post-op with an abrupt onset. Signs and symptoms include tachycardia, hyperthermia, CHF, dehydration and shock. Patients at greatest risk of developing thyroid storm are not in a state of normal thyroid function preoperatively.

The **parathyroid glands** are small endocrine glands that lie on the posterior portion of the thyroid gland. These glands secrete parathyroid hormone which is a hormone responsible for the regulation of

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calcium-phosphorus metabolism. A small amount of calcitonin is also secreted. The parathyroid glands are small and their location may vary; therefore, these glands may be accidentally removed or damaged during thyroid or other neck surgery resulting in hypocalcemia.

Signs of hypocalcemia – tingling of the extremities and around the mouth, laryngeal stridor, positive Trousseau’s and Chvostek’s signs – commonly develops 24-72 hours post-operatively, but may be seen as early as 1-3 hours post-op. Treatment is usually with calcium replacement to prevent tetany.

These are two noninvasive methods of assessing for hypocalcemia.

- Trousseau’s sign: inflate a BP cuff on patient’s upper arm, 20 mmHg above the systolic BP, to constrict circulation for a maximum of 3 minutes. If the hand goes into palmar flexion (contracts in a claw-like manner) this indicates a calcium deficit.
- Chvostek’s sign: tap patient’s face lightly over the facial nerve (above the mandibular angle, next to the earlobe). A calcium deficit is indicated if the facial muscles

## Procedure

Assess for Respiratory Distress/Airway Obstruction:	<ul style="list-style-type: none"> <li>• maintain HOB elevated minimum 30-45°</li> <li>• monitor respiratory status</li> <li>• maintain oxygen saturation &gt;95% by pulse oximetry as ordered</li> <li>• notify physician of respiratory difficulty (may be r/t laryngospasm, laryngeal edema, hematoma formation, tracheal deviation)</li> <li>• monitor for increased facial/neck swelling monitor lab results as ordered</li> <li>• <b>report laryngeal stridor immediately</b></li> </ul>
Assess for and report signs of Hypocalcemia:	<ul style="list-style-type: none"> <li>• assess Chvostek’s sign q shift and prn assess Trousseau’s sign q shift and prn</li> <li>• assess for and report circumoral facial tingling, tingling in fingers and toes, cramping, irritability, changes in mental status</li> <li>• monitor serum calcium levels as ordered have calcium gluconate available</li> <li>• maintain IV access minimum 72* hours post-op (while hospitalized)</li> </ul> <p><b>*Note: patients are often discharged home by 24 hours post-op</b></p>
Assess for and report signs of Bleeding:	<ul style="list-style-type: none"> <li>• monitor vital signs as ordered monitor intake and output</li> <li>• monitor for changes in mental status</li> <li>• check neck dressing for drainage (check behind neck as well for potential pooling of blood)</li> <li>• monitor for changes in dressing size which may indicate bleeding; excessive swelling in the neck will impair breathing r/t pressure on the trachea</li> </ul>
Assess for Nerve Damage:	<ul style="list-style-type: none"> <li>• evaluate for changes in quality of patient’s speech (i.e. hoarseness)</li> <li>• monitor for changes in ability to swallow or in respiratory status</li> </ul>

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	<ul style="list-style-type: none"> <li>take measures to prevent aspiration if nerve damage is suspected</li> </ul>
Assess and maintain integrity of Incisions:	<ul style="list-style-type: none"> <li>strip neck drains as ordered and monitor patency</li> </ul>
Assess for and report signs of Thyroid Storm:	<ul style="list-style-type: none"> <li>agitation, disorientation, increased temp, diarrhea, CHF</li> <li>report symptoms to physician and administer medications as ordered</li> </ul>

## PATIENT / CLIENT / RESIDENT EDUCATION:

Ensure patient/family understands:

- post-op incision care
- signs and symptoms to report to physician
- dates for follow-up with surgeon

The patient may be discharged within 24-72 hours postoperatively if there are no complications. The surgical wound should heal, without infection, in about 6 weeks.

## Site Specific Practices

**At VGH,** ionized calcium levels are drawn at 4 am. Ensure blood work is inputted as 'timed' for 4 am. Having lab values available for the surgical team during a.m. rounds assists with discharge planning.

## References

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- Gulanick, M., Myers, J., Klopp, A., Galanes, S., Gradishar, D., & Puzas, M. (2002). Nursing Care Plans - Nursing Diagnosis and Intervention (5th ed.). Chicago, IL: Mosby.
- Kumrow, D., & Dahlen, R. (2002). Thyroidectomy: Understanding the Potential for Complications. Medsurg Nursing, 11(5), 228-235.

## Revised By

**PROGRAM/UNIT:** Surgery (T9), VGH

## Endorsed By

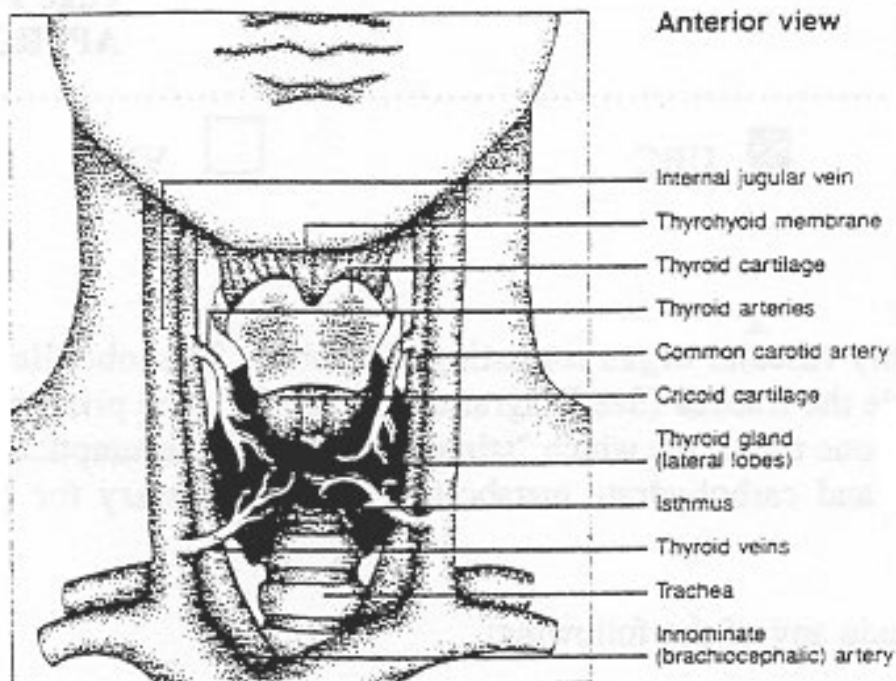
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## DATE OF REVISION: February 2008

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## Appendix A



## Anatomy of the Neck

