
Seed GLOBAL HEALTH

Project ECHO

# Nursing Care in Thyroid-Related Emergencies

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# Objectives

**By the end of this session:**

- Identify patients with hyperthyroidism and hypothyroidism
- List priority  Nursing interventions for patients with hyperthyroidism and hypothyroidism.
- Draw Nursing care plans for patients with hyperthyroidism and Hypothyroidism
- Health educate patients and caregivers on the management of hyper and hypothyroidism

# Nursing care and management of Hyperthyroidism

**It is focused on;**

- Promoting optimal thyroid hormone balance
- Symptom management
- Patient education.

**Goals include;**

- Ensuring adherence to medication regimen
- Stable vital signs
- Assessing for signs of thyroid storm; hypertension, tachycardia, hyperthermia

# Assessment

- Assess for ABCs: airway patency
- Regularly assess **vital signs**, with a particular focus on HR (tachycardia), B.P, & body temperature
- Assess **cardiovascular status**; extra heart sounds, complaints of orthopnea or dyspnea on exertion
- Assess **hydration status,** dehydration can further decrease circulating volume and compromise cardiac output
- Assess for **pressure ulcer development** secondary to hypoperfusion
- Note history of asthma and bronchoconstrictive disease, sinus bradycardia and heart blocks, advanced HF, or current pregnancy.

# Nursing assessment…

- Increased appetite and unintentional weight loss
- Excessive sweating and heat intolerance
- Nervousness, irritability, and anxiety
- Tremors or shaking of the hands
- Fatigue or muscle weakness
- Difficulty sleeping (insomnia)
- Changes in menstrual patterns
- Frequent bowel movements or diarrhea
- Enlarged thyroid gland (goiter)
- Fine, brittle hair and thinning of the skin
- Bulging eyes (exophthalmos) in Graves' disease, a specific form of hyperthyroidism.

# Nursing goals and expected outcomes

- Maintain adequate cardiac output for tissue perfusion
- Verbalize an increase in the level of energy
- Improved ability to participate in desired activities
- Maintain the usual reality orientation
- Patient demonstrates stable weight with normal lab values
- Patient reports reduced anxiety to a manageable level.
- Patient maintains moist eye membranes, free of ulcerations
- Patient verbalizes understanding of the disease process, therapeutic needs, and potential complications.

# Monitoring

- Monitor the ABCs, Ensure a patent airway
- Continuously monitor ECG for dysrhythmias or HR ?
- Monitor for ST segment changes indicative of myocardial ischemia.
- Continuously monitor oxygen saturation with pulse oximetry.
- Monitor fluid volume status; measure urine output hourly and determine fluid balance every 8 hours.
- Observe signs and symptoms of severe thirst, dry mucous membranes, weak or thready pulse, poor capillary refill, decreased urinary output, and Hypotension.

# Monitoring Cont....

- Auscultate breath sounds

  Note that adventitious sounds may indicate HF
- Monitor B.P by lying, sitting, and standing if possible

  Note widened pulse pressure
- Monitor temperature
- Weigh daily
- Encourage chair rest or bed rest
- Limit unnecessary activities.
- Monitor laboratory and diagnostic studies

# Nursing Interventions

**1. Managing Cardiac Symptoms**

- Carefully assess the patient for heart failure or pulmonary edema.
- Observe for adverse side effects of adrenergic antagonists: severe decrease in pulse, BP; signs of vascular congestion/HF; cardiac arrest
- Dopamine may be used to support blood pressure.

**2. Preventing Fatigue and Enhancing Energy Balance**

- Reduce oxygen demands by decreasing anxiety, reduce fever, decrease pain, and limit visitors if necessary.

**3. Maintaining Adequate Nutrition Balance**

- Provide a balanced diet, small high caloric meals with frequent servings, consult a dietitian
- Administer dextrose-containing intravenous fluids as ordered to correct fluid and glucose deficits.

# Nursing Interventions

4. Reducing Anxiety and Providing Emotional Support

- Administer antianxiety agents or sedatives and monitor their effects
- Reduce external stimuli: Place in a quiet room; provide soft, soothing music

5. Administered medication as indicated

- Thyroid hormone antagonists: propylthiouracil (PTU), methimazole (Tapazole)
- Beta-blockers: propranolol (Inderal), atenolol (Tenormin)
- Strong iodine solution (Lugol's solution)

# Nursing Interventions

6. Maintaining Tissue Integrity

- Suggest the use of dark glasses when awake, use of isotonic eye drops to moisten the conjunctiva, Institute pressure ulcer strategies.
- Administer Medications and Provide Pharmacologic Support

7. Improving Thought Processes

- Provide a quiet environment; decreased stimuli, cool room, dim lights. Limit procedures and/or personnel.
- Provide supplemental oxygen as ordered to help meet increased metabolic demands.
- Provide pulmonary hygiene to reduce pulmonary complications.

# Nursing Intervention

8. Temperature control

- provide a cool environment, limit bed linens or clothes, and administer tepid sponge baths, Hypothermia blankets

9. Anticipate aggressive treatment of precipitating factor

10. Prepare for possible surgery (thyroidectomy)

11. Initiating Patient Education and Health Teachings

# Hypothyroidism

- **Hypothyroidism** - condition classified by an underactive thyroid gland- when the thyroid does not produce enough hormones
- It occurs primarily in women between 30 to 60 years old
- **Myxedema** is a term generally used to denote **severe hypothyroidism**
- Myxedema coma, also called myxedema crisis, is a rare, life-threatening clinical condition that consists of severe hypothyroidism with decompensation
- It is characterized by **hypoxia** (not enough oxygen), **decreased cardiac output, decreased levels of consciousness** (hence coma), **bradycardia**, **hypotension,** and **hypothermia**

# Nursing assessment

**1. Monitor vital sign trends**
*Hypothermia, hypotension, bradycardia, decreased pulse pressure, and decreased respiratory rate are also observed*

**2. Assess for edema**
*Edema associated with hypothyroidism commonly manifests around the eyes (periorbital) but also occurs in the extremities.*

**3. Monitor daily weight**

*is necessary to assess for fluid overload*

**4. Assess the patient for constipation.**
*Hypothyroidism causes slow metabolism which can lead to constipation*

**5. Determine the patient's risk factors**
*include the following:*

- *Female gender, Age 60 years and older*
- *Family history of thyroid disorder*
- *Surgical removal of the thyroid gland*
- *Radiation therapy on the head and neck*

# Nursing Priority

- Airway patency; intubation and ventilation as they drift into coma state
- Monitor cardiac rhythms
- Warm the patient as they tend to be hypothermic
- Administer prescribed thyroid medications: levothyroxine
- Maintain euvolemia

# Nursing Diagnosis

- Infective tissue perfusion
- Hypothermia
- Risk for Imbalanced nutrition, less/more than body requirements
- Fatigue
- Activity intolerance
- Knowledge deficit

# Nursing Goals and Expected Outcomes

- The client will maintain a stable weight and takes in necessary nutrients
- The client and family members will verbalize correct information about hypothyroidism and taking thyroid hormone replacement.
- The client will identify the basis of fatigue and individual areas of control
- The client will verbalize a reduction of fatigue and increased ability to complete desired activities
- Patient will maintain optimal tissue perfusion

# Nursing Interventions

1. Enhancing Nutritional Status

- Assess client's weight and appetite
- Educate the client and family regarding body weight changes in hypothyroidism.
- Encourage the intake of foods rich in fiber.
- Encourage the client to follow a low-cholesterol, low-calorie, low-saturated-fat diet

2. Managing Fatigue

- Promoting rest and adequate sleep,
- Conserving energy during activities of daily living,
- Optimizing thyroid hormone replacement therapy

# Nursing Interventions…

3. Administer Medications and Provide Pharmacologic Support

- Educate on drug adherence, Potential side effects and drug interactions

4.Monitoring Results of Diagnostic and Laboratory Procedures

- TSH, T3, T4, Thyroid antibody test- autoimmune thyroid conditions

5.Assessing and Monitoring for Potential Complications

- Vital signs, hypothyroid crisis, mental health changes

6. Administer IV fluid as ordered, maintain an I&O chart

# Patient and Family Education

## HYPERTHYROIDISM

- Emphasis should be put on adherence to prescribed medication
- Adequate nutrition( nutrient dense feeds) small frequent meals, atleast 6 meals per day
- Educate on the need for adequate fluids intake
- Early recognition and treatment of infections
- Consistency of follow-up reviews
- Reinforce the need for regular thyroid

# Patient and Family Education

## HYPOTHYROIDISM

- Educate on potential drug interactions of other medications the person is taking with thyroid hormone replacement therapy (levothyroxine)
- Educate on need for regular monitoring thyroid hormone levels
- Educating on dietary and lifestyle changes as needed to improve treatment effectiveness and patient quality of life
- Educating on thyroid hormone replacement therapy (levothyroxine) and how/when to take the medication (e.g., daily, on an empty stomach)
- Providing further support and resources as needed to meet physical and mental health needs

# References


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**THANKS FOR LISTENING.**

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