

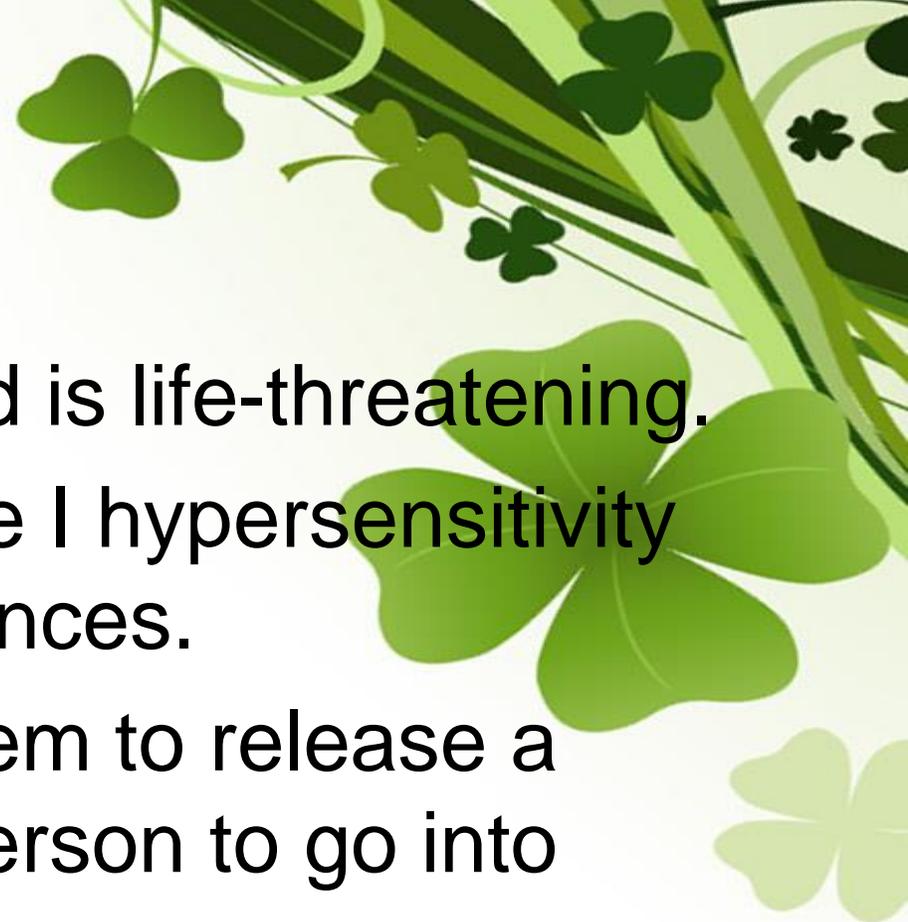
ANAPHYLAXIS

The background of the slide is a decorative pattern of green leaves and flowers. It features various shades of green, from light lime to dark forest green. The elements include large, stylized leaves, smaller clover-like flowers, and swirling vine-like patterns. The overall aesthetic is clean and natural.

Presented By
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INTRODUCTION

- ❖ Anaphylactic shock occurs rapidly and is life-threatening.
- ❖ Anaphylactic shock is a systemic, type I hypersensitivity reaction that often has fatal consequences.
- ❖ Anaphylaxis causes the immune system to release a flood of chemicals that can cause a person to go into shock.



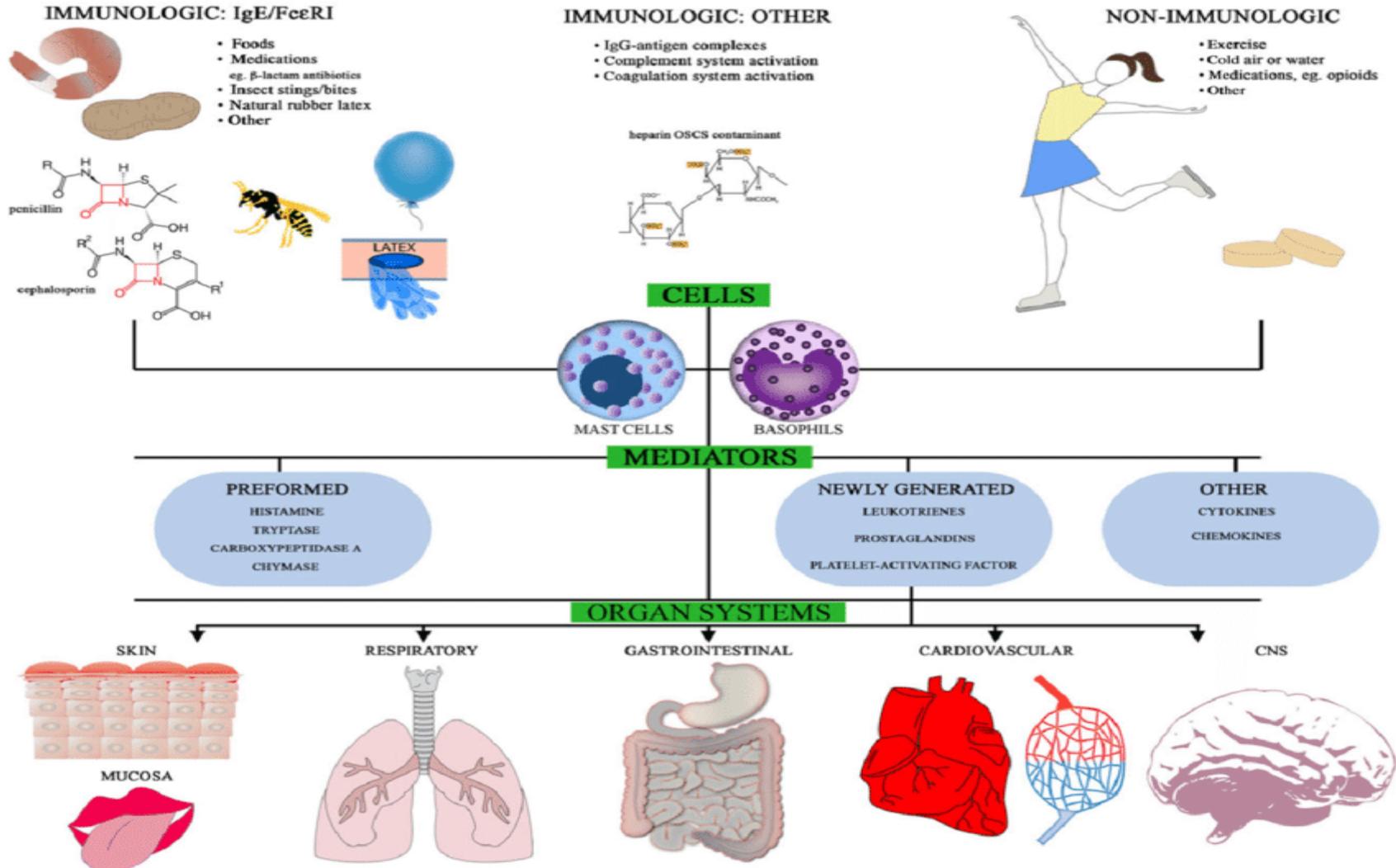
CAUSES



- **Food allergies:** The most common anaphylaxis triggers in children are food allergies, such as to peanuts, and tree nuts, fish, shellfish and milk.
- **Medication allergies:** Certain medications, including antibiotics, aspirin and other over-the-counter pain relievers, and the intravenous (IV) contrast used in some imaging tests.
- **Insect allergies:** Stings from bees, yellow jackets, wasps, hornets and fire ants.
- **Latex allergy:** Latex allergy develops after many previous exposures to latex.

PATHOPHYSIOLOGY

MECHANISMS AND TRIGGERS

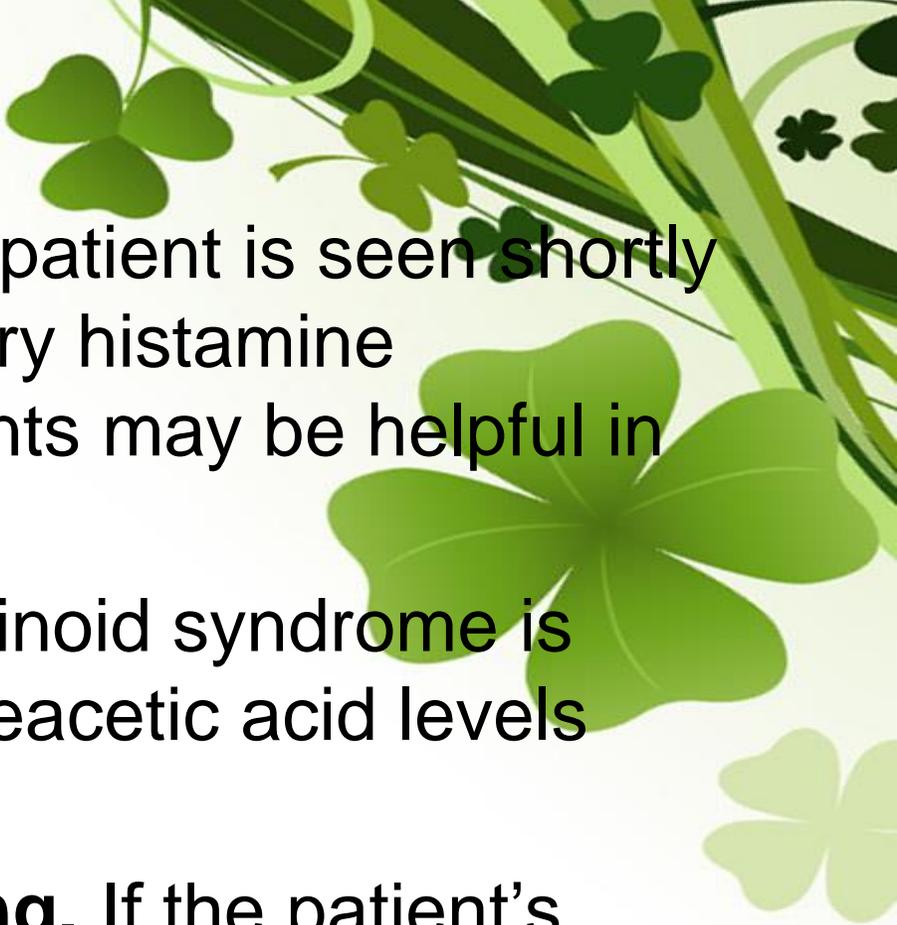


CLINICAL MANIFESTATIONS



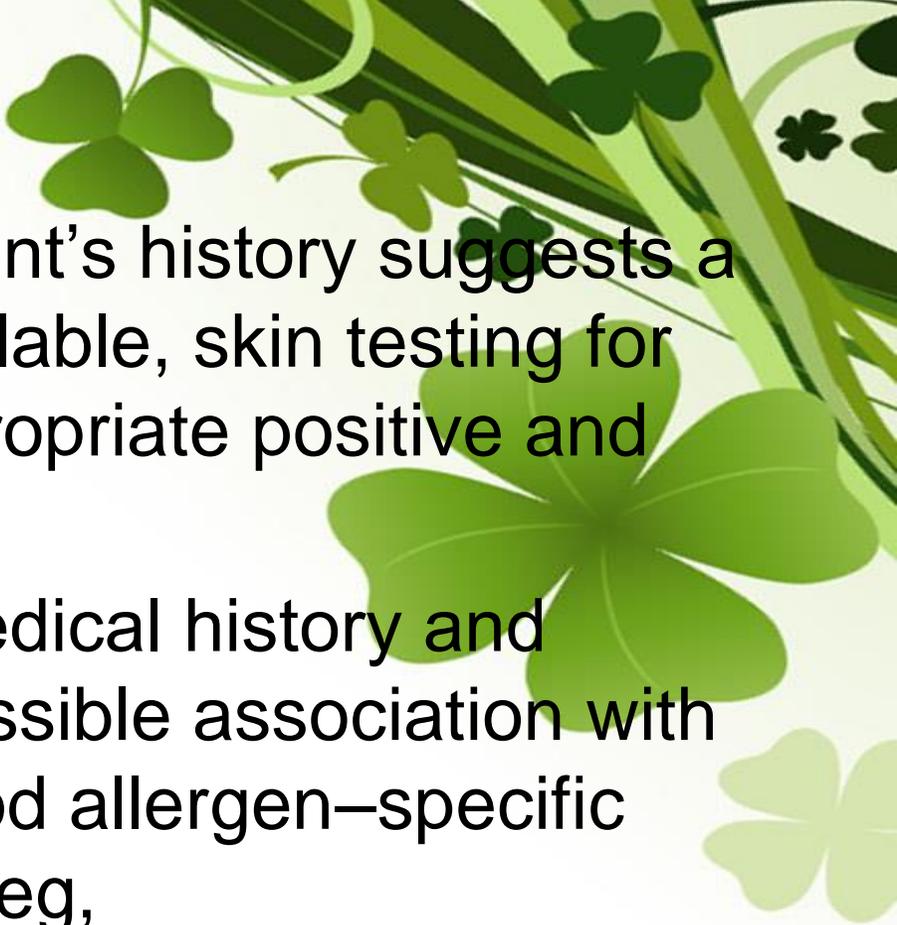
- **Anxiety:** The first symptoms usually include a feeling of impending doom or fright.
- **Skin reactions:** Skin reactions such as hives, itching, and flushed or pale skin follow.
- **Shortness of breath:** Constriction of the airways and a swollen tongue or throat could cause wheezing and troubled breathing.
- **Hypotension:** A low blood pressure occurs as one of the major symptoms of shock.
- **Tachycardia:** The heart compensates through pumping faster and trying to deliver blood to all body systems.
- **Dizziness:** The patient may feel dizzy which could lead to fainting.

DIAGNOSTIC EVALUATION



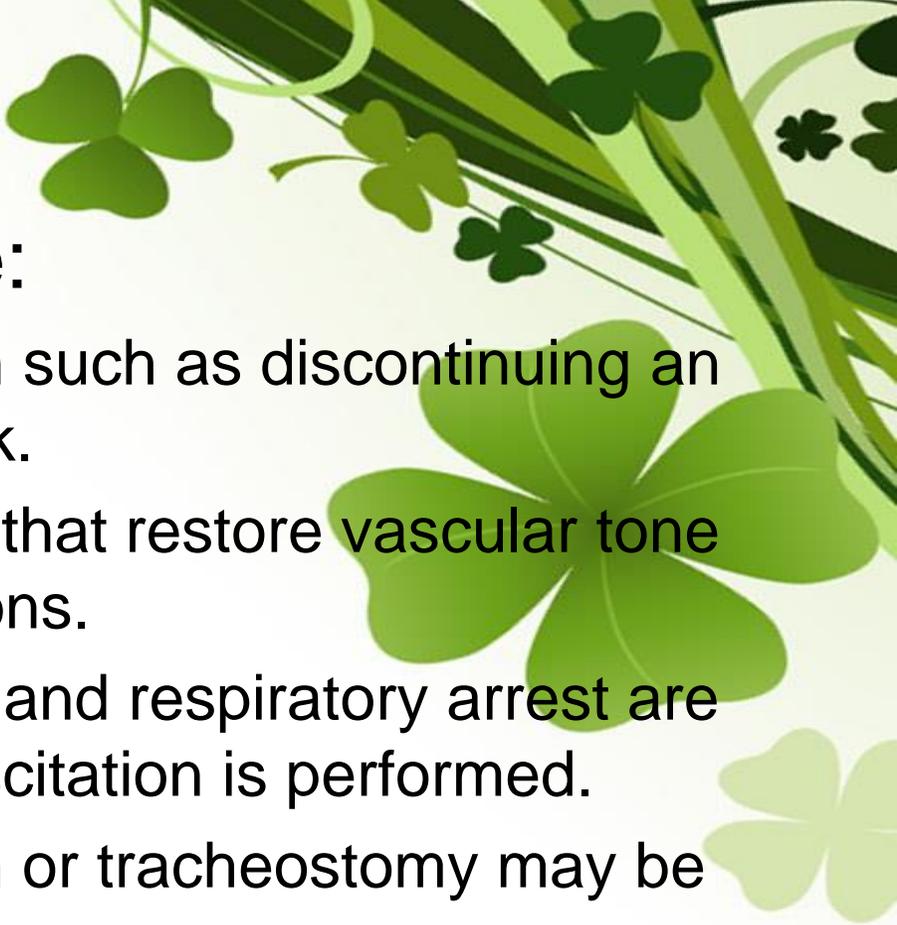
- **Histamine and tryptase assessment.** If a patient is seen shortly after an episode, plasma histamine or urinary histamine metabolites, or serum tryptase measurements may be helpful in confirming the diagnosis.
- **5-hydroxyindoleacetic acid levels.** If carcinoid syndrome is considered, urinary 24-hour 5-hydroxyindoleacetic acid levels should be measured.
- **Testing for suspected insect bites or sting.** If the patient's history suggests an insect sting, allergen-specific skin testing to Hymenoptera venoms (bees, yellow jackets, wasps & hornets) should be performed.

DIAGNOSTIC EVALUATION



- **Testing for medication allergy.** If the patient's history suggests a penicillin etiology and the reagents are available, skin testing for penicillin should be performed with the appropriate positive and negative controls.
- **Testing for food allergy.** If the patient's medical history and physical examination findings suggest a possible association with food ingestion, percutaneous (puncture) food allergen-specific skin tests and/or in vitro-specific IgE tests (eg, radioallergosorbent assay test [RAST] or ImmunoCAP IgE tests can be performed, with an understanding that both false-positive and false-negative results may occur.

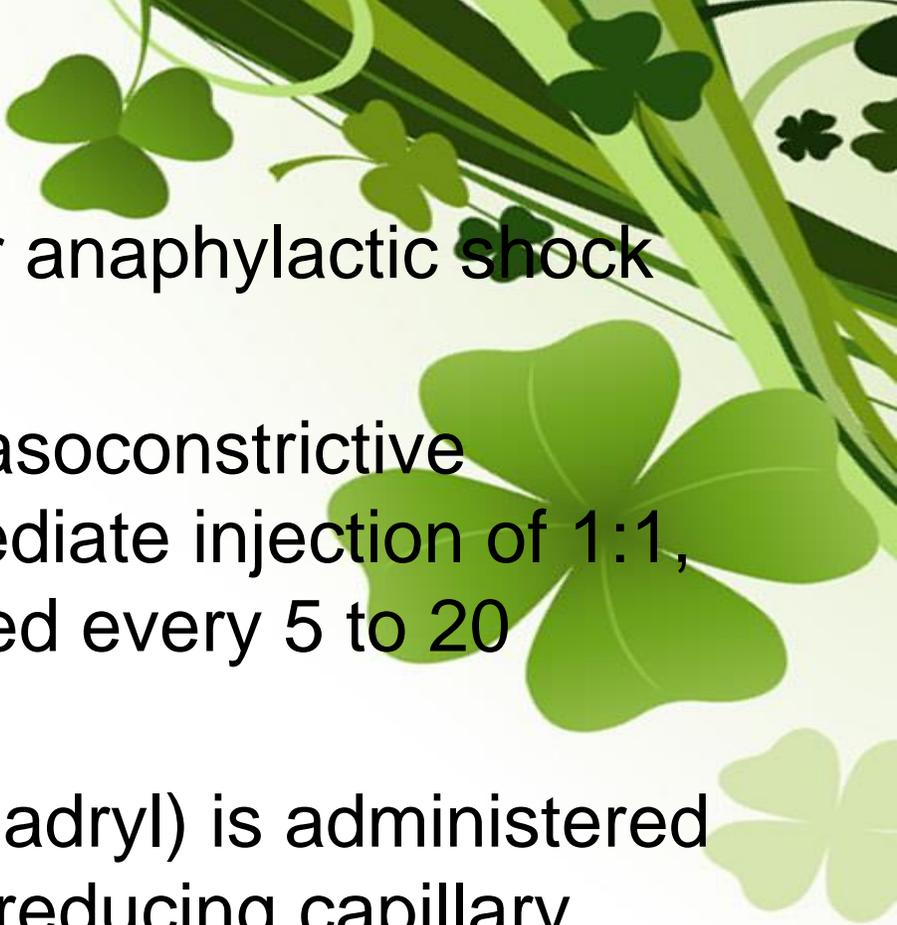
MEDICAL MANAGEMENT



Treatment of anaphylactic shock include:

- **Remove antigen:** Removing the causative antigen such as discontinuing an antibiotic agent could stop the progression of shock.
- **Administer medications:** Administer medications that restore vascular tone and provide emergency support of basic life functions.
- **Cardiopulmonary resuscitation:** If cardiac arrest and respiratory arrest are imminent or have occurred, cardiopulmonary resuscitation is performed.
- **Endotracheal intubation:** Endotracheal intubation or tracheostomy may be necessary to establish an airway.
- **Intravenous therapy:** IV lines are inserted to provide access for administering fluids and medications.

MEDICAL MANAGEMENT



Medications used for a patient at risk or under anaphylactic shock are:

- **Epinephrine:** Epinephrine is given for its vasoconstrictive reaction; for emergency situations, an immediate injection of 1:1,000 aqueous solution, 0.1 to 0.5 ml, repeated every 5 to 20 minutes is given.
- **Diphenhydramine:** Diphenhydramine (Benadryl) is administered to reverse the effects of histamine, thereby reducing capillary permeability.
- **Albuterol:** Albuterol (Proventil) may be given to reverse histamine-induced bronchospasm.

NURSING MANAGEMENT

Nursing Assessment

Communication is an essential part of assessment.

- ❖ **Assess any kind of allergy.** The nurse must assess all patients for allergies or previous reactions to antigens.
- ❖ **Assess patient's knowledge.** The nurse must also assess the patient's understanding of previous reactions and steps taken by the patient and the family to prevent further exposure to antigens.
- ❖ **New allergies.** When new allergies are identified, the nurse advises the patient to wear or carry identification that names the specific allergen or antigen.



NURSING MANAGEMENT

Nursing Diagnosis

Based on the assessment data, the nursing diagnoses appropriate for the patient are:

- ❖ **Impaired gas exchange** related to imbalanced ventilation perfusion.
- ❖ **Altered tissue perfusion** related to decreased blood flow secondary to vascular disorders due to anaphylactic reactions.
- ❖ **Ineffective breathing pattern** related to the swelling of the nasal mucosa wall.
- ❖ **Acute pain** related to gastric irritation.
- ❖ **Impaired skin integrity** related to changes in circulation.



NURSING MANAGEMENT

Goals

- Client will maintain an effective breathing pattern, as evidenced by relaxed breathing at normal rate and depth and absence of adventitious breath sounds.
- Client will demonstrate improved ventilation as evidenced by an absence of shortness of breath and respiratory distress.
- Client will display hemodynamic stability, as evidenced by strong peripheral pulses; HR 60 to 100 beats/min with regular rhythm; systolic BP within 120 mm Hg of baseline; urine output greater than 30 ml/hr; warm, dry skin; and alert, responsive.
- Client and significant others will verbalize understanding of need to carry emergency components for intervention, need to inform health care providers of allergies, need to wear medical alert bracelet/necklace, and the importance of seeking emergency care.

NURSING MANAGEMENT

Nursing Interventions

- **Monitor client's airway:** Assess the client for the sensation of a narrowed airway.
- **Monitor the oxygenation status:** Monitor oxygen saturation and arterial blood gas values.
- **Focus breathing:** Instruct the client to breathe slowly and deeply.
- **Positioning:** Position the client upright as this position provides oxygenation by promoting maximum chest expansion and is the position of choice during respiratory distress.



NURSING MANAGEMENT

Nursing Interventions

- **Activity:** Encourage adequate rest and limit activities to within client's tolerance.
- **Hemodynamic parameters:** Monitor the client's central venous pressure (CVP), pulmonary artery diastolic pressure (PADP), pulmonary capillary wedge pressure, and cardiac output/cardiac index.
- **Monitor urine output:** The renal system compensates for low blood pressure by retaining water, and oliguria is a classic sign of inadequate renal perfusion



NURSING MANAGEMENT

Evaluation

Expected patient outcomes include:

- Client maintained an effective breathing pattern.
- Client demonstrated improved ventilation.
- Client displayed hemodynamic stability.
- Client and significant others verbalized understanding of allergic reaction, its prevention, and management.
- Client and significant others verbalized understanding of need to carry emergency components for intervention, need to inform health care providers of allergies, need to wear medical alert bracelet/necklace, and the importance of seeking emergency care.



NURSING MANAGEMENT

Discharge and Home Care Guidelines

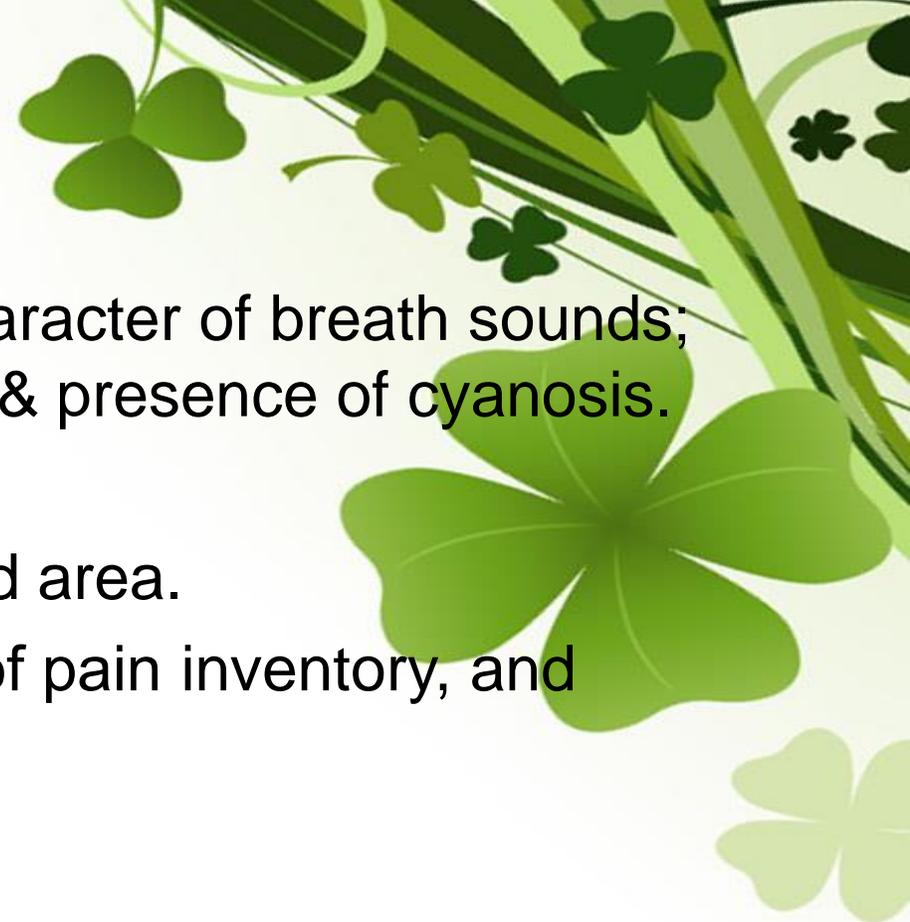
Upon discharge, the patient and family need to learn about the following:

- **Emergency medications.** The nurse should provide information about emergency medications and plans that should be considered when a crisis reoccur.
- **Precipitating factors.** The nurse must assist the client and/or family in identifying factors that precipitate on exacerbate crises.

NURSING MANAGEMENT

Documentation Guidelines

- Assessment findings including respiratory rate, character of breath sounds; frequency, amount, and appearance of secretions & presence of cyanosis.
- Conditions that may interfere with oxygen supply.
- Pulses and BP, including above and below affected area.
- Client's description of response to pain, specifics of pain inventory, and acceptable level of pain.
- Prior medication use.
- Plan of care, teaching plan & specific intervention.
- Client's responses to treatment, teaching, and actions performed.
- Attainment or progress towards desired outcome.
- Modifications to plan of care.
- Long-term needs.





Thank you ...