NURSING CARE FOR A PATIENT WITH A CUTE BURNS

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INTRODUCTION

Acute burn is a medical and nursing emergency

- Causes:
- Massive fluid loss
- Risk of airway compromise
- High risk of infection
- Nursing care focuses on **ABC, fluid resuscitation, pain control, wound care, and nutrition**

NURSING CARE PLAN IN ACUTE BURNS

The Nursing Process is a systematic approach to patient care:

Assessment – Collecting patient data

Diagnosis – Identifying patient problems

Planning – Setting goals and interventions

Implementation – Executing care plan

Evaluation – Assessing outcomes

ASSESSMENT – PRIMARY SURVEY (ABCDE)

- **Airway:** Hoarseness, soot, singed hair (inhalation injury)
- **Breathing:** Respiratory rate, SpO_2, chest expansion
- **Circulation:** BP, pulse, capillary refill, bleeding
- **Disability:** Level of consciousness, pain score
- **Exposure:** %TBSA, depth of burns, prevent hypothermia

BURN-SPECIFIC ASSESSMENT

- **Extent & Depth: Use Rule of Nines or Lund-Browder chart to calculate %TBSA.**
- **Type of Burn: Thermal, chemical, electrical.**
- **Associated Injuries: Fractures, trauma.**
- **Signs of Infection: Redness, exudate, odor.**
- **Fluid Loss: Signs of hypovolemia (low BP, tachycardia, decreased urine output).**
- **Urine output: Insert catheter, monitor hourly**

Assessment	Nursing diagnosis	Goals / desired outcomes	interventions	Rationale	Evaluation
Subjective data Reports intense thirst • Complains of dizziness and weakness • Reports dry mouth Reports dizziness **Objective data** Extensive Burns 70% TBSA • Hypotension • Tachycardia • Urine output <0.5 mL/kg/hr • Dark urine • Dry mucous membranes • Poor skin turgor	**Deficient Fluid Volume** related to massive plasma loss and increased capillary permeability secondary to extensive burns **as evidenced by** hypotension, tachycardia, decreased urine output, dry mucous membranes	**Within 1 hour**, the patient will demonstrate improved circulatory status as evidenced by systolic blood pressure ≥ 90 mmHg. **Within 2 hours**, urine output will increase to **≥ 0.5 mL/kg/hr**. **Within 4 hours**, heart rate will reduce to **≤ 100 beats/min**. **Within 24 hours**, the patient will show no clinical signs of hypovolemic shock	Monitor vital signs frequently	Detects early shock	Vital signs stable • Adequate urine output achieved
			• Insert urinary catheter and monitor hourly urine output	• Urine output reflects renal	
			• Establish two large-bore IV lines	• Allows rapid fluid replacement	
			• Administer IV fluids as prescribed (e.g., Ringer's lactate via Parkland formula)	• Replaces fluid losses from burns	
			• Elevate burned extremities if appropriate • Observe for signs of fluid overload	• Prevents complications of over-resuscitation	

Assessment	Nursing diagnosis	Goals / desired outcomes	interventions	Rationale	Evaluation
Subjective: Shortness of breath, chest tightness, difficulty breathing. **Objective:** Dyspnea, stridor, wheezing, diminished breath sounds, SpO_2 < 92%, cyanosis, restlessness, accessory muscle use. **isk Factors / History:** Recent smoke , burns to face/neck/upper airway.	**Impaired Gas Exchange** related to inhalation injury and airway edema evidenced by Decreased oxygen saturation (SpO_2 < 92%) Dyspnea and labored breathing Increased respiratory rate (tachypnea) Use of accessory muscles	**Within 1 hour of admission**, patient will maintain patent airway and effective gas exchange as evidenced by SpO_2 ≥ 95%, PaO_2 within normal range, and absence of respiratory distress	1. Assess airway frequently for edema, stridor, or obstruction.	1. Early assessment detects airway compromise, preventing obstruction and respiratory failure.	• Patient maintains SpO_2 ≥ 92% on prescribed oxygen. - Respiratory rate remains within normal limits (12–20/min). - Breath sounds are clear and airway obstruction signs (stridor, wheezing) are reduced
			2. Elevate head of bed 30–45°.	2. Semi-Fowler's position improves lung expansion, oxygenation, and reduces work of breathing	
			3. Administer supplemental oxygen per protocol	3. Supplemental O_2 increases oxygen delivery and prevents hypoxemia	
			4. Suction secretions as needed	4. Suctioning removes secretions that block airways, improving ventilation.	
			5. Encourage deep breathing and coughing if possible	5. Deep breathing and coughing promote alveolar ventilation and secretion clearance.	

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Assessment	Nursing diagnosis	Goals / desired outcomes	interventions	Rationale	Evaluation
			6. Monitor vital signs and SpO_2 continuously.	6. Continuous monitoring allows early detection of deterioration.	- ABG values show improved oxygenation (PaO_2 normalized). - Patient demonstrates effective coughing and airway clearance. - Patient/family verbalizes understanding of hypoxia warning signs and airway management.
			7. Prepare for emergency airway interventions if airway compromise worsens.	7. Early preparation for airway intervention prevents life-threatening obstruction.	
			8. Administer prescribed medications (bronchodilators, corticosteroids, analgesics).	8. Medications reduce airway inflammation, improve airflow, and allow effective breathing.	
			9. Educate patient/family on early signs of hypoxia and airway management.	9. Education empowers patient/family to recognize early signs of hypoxia and respond promptly.	

Assessment	Nursing diagnosis	Goals / desired outcomes	interventions	Rationale	Evaluation
Subjective: • Reports severe pain (8–10/10) **Objective:** • Restlessness, facial grimacing, tachycardia	**Acute Pain** related to tissue injury secondary to burns	Short-term: Patient will report pain ≤3/10 within 30 minutes of intervention. - Long-term: Patient will demonstrate effective pain management strategies and improved comfort during wound care and ADLs.	**Non-pharmacologic:** Positioning, gentle cooling, distraction, relaxation techniques, guided imagery, calm environment.	- Non-pharmacologic methods enhance coping and reduce anxiety.	Reassess pain using pain scale. - Observe for reduced grimacing, improved mobility, stable vitals. - Determine tolerance for dressing changes and ADLs. - Adjust pain management plan if goals are not
			Wound care: Pre-medicate before dressing changes; use gentle techniques; maintain warmth.	- Pre-medication prevents procedural pain spikes and improves patient cooperation.	
			Education: Explain pain plan, encourage reporting of pain, teach coping strategies.	- Education empowers the patient to participate in pain management and recovery.	
			Administer pain medication as prescribed	Medications reduce pain intensity and improve comfort.	

Assessment	Nursing diagnosis	Goals / desired outcomes	interventions	Rationale	Evaluation
Subjective: Patient reports pain, discomfort, or concern about wound healing. **Objective:** Open wounds, red/blistered skin, possible drainage, fever, elevated WBC	**Risk for Infection** related to loss of skin barrier and invasive procedures	1. Patient will remain free from infection throughout hospitalization. 2. Burn wounds will show progressive healing without signs of infection. 3. Patient/family will demonstrate proper wound care and hygiene.	• Maintain strict aseptic technique	Prevents infection by avoiding germs	No evidence of local or systemic infection Wounds show healing without purulent drainage or erythema. Patient/family correctly demonstrate wound care techniques.
			• Perform sterile wound care/dressing changes	Keeps wound clean and lowers infection risk	
			• Administer prescribed antimicrobial therapy	Kills bacteria and stops infection spread	
			• Monitor temperature, WBC, and wound appearance	Checks for infection signs early	
			Monitor for systemic signs of infection (hypotension, tachycardia, altered mental status)	Detects serious infection (sepsis) quickly	

Assessment	Nursing diagnosis	Goals / desired outcomes	interventions	Rationale	Evaluation
Subjective: Pain, burning, tenderness, itching; anxiety/fear; difficulty performing ADLs. **Objective:** Redness, blistering, charring, edema, warmth, drainage;	Impaired Skin Integrity related to thermal injury as evidenced by partial-thickness burn	**Within 7–14 days**, burn wounds will show progressive healing as evidenced by viable tissue, healthy granulation, and absence of necrosis	• Conduct daily wound assessments	Monitor healing, detect infection or complications early	• Wound healing evident
			• Apply topical antimicrobials as prescribed	Prevent or reduce local infection	
			• Assist with debridement/escharotomy as indicated	Remove dead tissue and relieve pressure to promote healing	
			• Reposition patient regularly	Prevent pressure ulcers, improve circulation, and reduce edema	

Assessment	Nursing diagnosis	Goals / desired outcomes	interventions	Rationale	Evaluation
Subjective data: Loss of appetite, fatigue, weakness, nausea, early satiety, pain affecting intake, stress or illness affecting appetite. **Objective:** unintentional weight loss (>2% in 1 week), muscle wasting, poor skin turgor, dry hair, delayed wound healing, low albumin/prealbumin, electrolyte imbalances, fever, tachycardia, oral health issues.	**Imbalanced Nutrition: Less Than Body Requirements** related to increased metabolic demands	• Gain or maintain 0.5–1 kg per week. • Consume 75–100% of daily calorie/protein needs within 1 week. • Show improved energy and perform ADLs without fatigue in 1–2 weeks. • Lab values (albumin, prealbumin) normalize within 2–4 weeks.	1. Assess dietary intake, weight, BMI, and lab values daily.	1. Identifies nutritional deficits and guides plan	Weight stabilized or increased. - Patient meets ≥75% of caloric/protein needs. - Improved energy, participation in ADLs. - Lab values trending toward normal. - Wound healing progressing
			2. Collaborate with dietitian to calculate caloric/protein requirements.	2. Ensures intake meets increased metabolic demands.	
			3. Offer small, frequent, high-calorie/protein meals and oral supplements	3. Facilitates adequate intake despite limited appetite.	
			4. Treat symptoms interfering with intake (nausea, pain, fatigue).	4. Removes barriers to eating.	
			5. Educate patient/family on nutrient-dense foods and importance of nutrition	5. Promotes adherence and understanding.	

Assessment	Nursing diagnosis	Goals / desired outcomes	interventions	Rationale	Evaluation
Subjective: Patient reports feeling cold, chills, numbness, or shivering. **Objective:** Core temperature <36°C (96.8°F) or trending down; pale, cool, clammy skin; poor peripheral perfusion; tachycardia or hypotension; extensive skin loss (burns, wounds); decreased mobility; cold environment exposure.	**Risk for Hypothermia** related to loss of skin integrity and impaired thermoregulation	**Within 2 hours**, patient will maintain normothermia (36–37.5°C) as evidenced by stable vital signs and absence of shivering	1. Monitor core temperature frequently (oral, tympanic, rectal).	1. Early detection allows prompt intervention	Patient maintains core temperature 36–37.5°C. - Skin remains warm and well-perfused. - No shivering, hypotension, or hypothermia-related complications. - Patient/family demonstrates appropriate warming strategies.
			2. Keep patient in a warm environment (room temp 24–28°C for burn patients).	2. Prevents heat loss from environmental exposure	
			3. Cover exposed skin with sterile, warm dressings or blankets.	3. Reduces radiant and evaporative heat loss.	
			4. Use warming devices (heated blankets, radiant warmers, warmed IV fluids).	4. Actively raises core body temperature	
			5. Minimize exposure during procedures (bathing, wound care).	5. Prevents additional heat loss during care.	
			6. Encourage patient to wear warm clothing, hats, or socks if possible.	6. Conserves heat, especially from head and extremities.	

Assessment	Nursing diagnosis	Goals / desired outcomes	interventions	Rationale	Evaluation
Subjective: • Expresses fear, anxiety, and sleep disturbance **Objective:** •Restlessness, insomnia	**Anxiety** related to traumatic injury, pain, and altered body image	**Within 48–72 hours**, patient will verbalize reduced anxiety and demonstrate effective coping behaviors	• Provide calm, supportive environment	A calm environment and reassurance reduce sympathetic nervous system stimulation, lowering anxiety	- Patient reports decreased anxiety - Vital signs remain stable during procedures - Patient demonstrates coping techniques effectively
			- Encourage verbalization of fears and active listening	- Verbalizing fears helps patient process emotions and reduces tension	
			- Teach relaxation techniques (deep breathing, guided imagery)	- Relaxation techniques promote physiologic and psychological calm	
			- Explain procedures clearly and reassure patient	- Clear explanations reduce fear of the unknown	
			- Involve family supports	- Family support provides emotional stability and security	

Conclusion – Nursing Management of Acute Burns

Prompt assessment and accurate evaluation are crucial.

Effective wound care and infection prevention improve outcomes.

Continuous monitoring of vital signs and complications is essential.

Pain management and psychological support enhance patient recovery.

Nurses are central to holistic care, patient safety, and rehabilitation.

"Timely, compassionate, and skilled nursing care saves lives and promotes healing in acute burn patients."