

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY  
SAULT STE, MARIE, ONTARIO

CODRSE OUTLINE

Course Title: SHOCK  
Code No: NUR 411  
Program: RN CRITICAL CARE NURSING PROGRAM  
Semester:  
Date: MARCH, 1989  
Author: PENNY EDWARDS/BRENDA WARNOCK

New:

Revision:

APPROVED; Chairperson

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**COURSE DESCRIPTION;**

The clinical syndrome of shock will be discussed including classifications, stages and compensatory mechanisms. Discussions will address the nursing care in the management and prevention of shock.

**COURSE OBJECTIVES;**

Part A - Pathophysiology

1. Describe the clinical syndrome of shock and its effects on metabolic and cellular activity.
2. Describe the etiology and pathophysiology of the major classifications of shock.

Part B - Nursing Care

- 3, Formulate an appropriate plan of nursing care for the patient in shock.

**METHOD OF EVALUATION;**

Nursing Care Study (take home assignment)

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OBJECTIVES

CONTENT

LEARNING RESOURCES

Part A - Pathophysiology

1\* Explain normal cellular structure and metabolic activity.

- Cell structure
- Aerobic energy production (Krebs cycle)
- Anaerobic energy production
- Na/K transport in cell
- cell permeability

Any current anatomy and physiology text

Grif-Alspach, Jo-Ann; Susan Williams, Core Curriculum for Critical Care Nursing, W.B. Saunders Co\*, Toronto, 1985

Describe nervous, hormonal and chemical feedback mechanisms in relation to body functions.

Nervous

- sympathetic
- parasympathetic
- pressoreceptors/baroreceptors

Hudak, Carolyn; Barbara Gallo and Thelma Lohr. Critical Care Nursing, 4th ed., J-B. Lippincott Co., Philadelphia, 1986

Hormonal

- ADH
- Aldosterone
- Renin-Angiotensin System

Holloway, Nancy, Nursing the Critically Ill Adult, 3rd ed., Addison-Wesley Pub. Co., Don Mills, 1988

Chemical

- CO2 level
- cardiac output

Nurse Review Clinical Update System ^  
"Vascular Problems", Springhouse Pub. Co\*, Philadelphia, 1988

3- Define Shock

4, Identify the major classifications of shock.

- Hypovolemic
- Septic  
(Distributive Vasogenic)
- Anaphylactic  
(Distributive Vasogenic)
- Neurogenic  
(Distributive)
- Cardiogenic

"Caring for the Patient in Hypovolemic Shock", Nursing '84. March, 1984, p. 24-27

Deglin, Judith and Ken Walters, "Anaphylactic Shock: As Soon as You See It - Stop It", Sept, 1984, p. 6-8

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Differentiate the patho-physiological changes including cellular level) which occur with each classification of shock.	- Cellular response Fluid compartment shifts: Starlings Law pressures i) plasma hydrostatic pressure ii) interstitial fluid hydrostatic pressure iii) plasma osmotic pressure iv) interstitial fluid osmotic pressure  electrolytes (eg: Na/K pump)	Cohen, Michael, "Drug-induced Anaphylaxis", <u>Nursing '85</u> , February, 1985, p, 43  Sumner, Sara, "Septic Shock", <u>Nursing '87</u> , February, 1987, p. 33  Randall, Brendal, "Reacting to Anaphylaxis", <u>Nursing '86</u> , March, 1986, p. 34-40
Describe the stages of shock.	Cell injury or the cell in shock early (compensatory), middle (progressive)/ late (refractory), MSOF (multi-system organ failure)	Rice, Vee, "Shock Management: Part 1 - Fluid Volume Replacement", <u>Critical Care Nursing</u> , Nov-Dec. 1984, p. 69-82  "Master Care Plan - Helping the Patient in Shock", RN. July, 1985, p. 26-27
7. Explain the related clinical manifestations for each stage of shock	Common clinical manifestations specific clinical manifestations for each type of shock.	Taylor, Delores, "Anaphylaxis, Physiology, Signs & Symptoms", <u>Nursing '84</u> , June, 1984, p. 44-45

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| 8. Describe the medical management of the patient with shock.                | Cheraodynamic parameters<br>Hemodynamic monitoring<br>Pharmacology<br>Alpha & Beta receptor stimulants: <ul style="list-style-type: none"><li>- vasopressors (beta adenergic stimulators, alpha adenergic stimulators)</li><li>- steroids</li><li>-- vasodilators</li><li>- antihistamines</li><li>- bronchodilators</li><li>- volume expanders</li></ul> |  |
| Explain the potential complications of shock.                                | - DIG<br>- ARDS   |  |
| 10. Identify the appropriate diagnostic findings for the patient with shock. | acid/base balance<br>electrolytes<br>hematology<br>urinalysis:<br>(specific gravity, osmolality)  |  |

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LEARNING RESOURCES

Part B - Nursing Interventions

1. Identify the appropriate nursing care for the patient in shock,

Assessment

- high risk patients
- precipitating factors
- physical exam

Diagnosis

Planning

- hemodynamic stability
- airway
- prevention of complications

Implementation

- blood volume expanders
- ventilation
- adequate circulation
- urinary output
- acid/base disturbances
- management specific to:
  - i) hypovolemic shock
  - ii) septic shock
  - iii) cardiogenic shock
  - iv) anaphylactic shock

Complete a nursing care study related to the patient in shock.

Evaluation

Case study  
Assignment