

SAULT COLLEGE DIPLOMA NURSING PROGRAM
BIO 200: PATHOLOGY & THERAPEUTICS
REGULATION: TEMPERATURE

YEAR II, SEMESTER III

MAY 1984 ^a

OBJECTIVES

CONTENT GUIDE

LEARNING ACTIVITIES

1. a. Describe health problems, related to temperature, which are common to Canadians.
- b. Relate these problems to the appropriate stimuli and responses.

Hypothermia
- neonatal (cold stress)
- exposure, frost bite
Heat Stroke
Heat Exhaustion
Infections (see protection)
Malignant hyperthermia

Study assignments for this unit:
Kozier & Erb, Fundamentals of Nursing pp. 166, 201, review 240-2, 248-9, 251 & 381-392.

Waley and Wong, Nursing Care of Infants, and Children pp. 60, 242, 314-15 (sensation of heat)

Reeder et al, Maternity Nursing pp. 19, 348, 445-6.

2. Describe ineffective responses related to temperature.

Hypothermia, Hyperthermia
Sensory changes
- "aches"
- sensorium changes
- convulsions
- malaise
- during anaesthesia

3. Describe the stimuli which commonly result in adaptive and ineffective responses related to temperature.

1. Internal

- a) age/developmental stage: neonate, premature neonate; elderly
- b) genetics
 - i) heredity: eg., as in malignant hyperthermia
 - ii) autoimmunity
- c) neoplasms: of hypothalamus or medulla

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- d) micro-organisms: release of endotoxins which irritate cells of medulla
- e) allergens
- f) immobility: eg., inability to regulate external temperature
- g) psychological: eg., some disorders may alter perceptions of heat and cold
- h) health status: eg., ineffective responses in cardiovascular system; hyper-/hypothyroidism
- i) socio-cultural: eg., financial restrictions

2. External

- a) environmental: extreme variations of heat or cold
- b) iatrogenic: vasodilating drugs, sedative and tranquilizing drugs; ineffective responses affecting autonomic nervous system
- c) trauma: eg., head injury, surgery

4. Explain the relationship of the stimuli to the adaptive and ineffective responses of Canadians with common problems related to temperature.

Fever
 - adaptive
 - ineffective
 Temperature to touch
 Colour
 Perspiration
 Eyes
 Chills; "goose bumps"; chattering teeth

 Pulse
 Respirations
 Blood Pressure
 Heat production
 Heat loss

REGULATION: TEMPERATURE

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OBJECTIVES

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LEARNING ACTIVITIES

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| 5. Describe the temperature functions which are affected by adaptive and ineffective responses and the related stimuli. | | |
| 6. Identify the diagnostic measures related to temperature. | Temperature | |
| 7. Describe the use, actions and side effects of medications which promote adaptation related to temperature. | | See drug list under temperature-antipyretics
See drug text. |
| 8. Describe the application of heat and cold as therapeutic measures. | Hot water bottle
Ice pack
Compress
Sitz bath
Electric pad
Cooling and warming blankets
Radiant heater
Incubator
Heat lamp | |
| 9. Discuss current areas of research related to temperature. | Therapeutic hypothermia
Therapeutic hyperthermia
- cancer | |