DIPLOMA NURSING PROGRAM Pathology and Therapeutics Fluids and Electrolytes

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YEAR II - Semester III

August 1982

| OBJECTIVES •   | CONTENT GUIDE  | LEARNING ACTIVITIES .   |
|--|--|---|
| <ol> <li>Describe health problems related to Fluids and Electrolytes, which are common to Canadians</li> <li>Describe ineffective biological responses related to fluids and Electrolytes</li> </ol> | Nephrosis Glomerulonephritis Renal failure Edema Diabetes insipidus Burns Acidosis, alkalosis Imbalances of Na, K, Ca Imbalances of fluid  ↑ or urine output concentrated urine dry mouth ( saliva) ↓ tissue turgor (sunken eyes sunken fontanels) changes in B/P &P ↓ or ↑ wt. weakness, fatigue impairment mental status & consciousness  irritability lethargy confusion apprehension stupor coma | Please note that assigned textbook pages include information relating to all objectives in this unit. These assigned pages also include nursing care and some conditions which are not covered in this Pathology and Therapeutics course. Try to concentrate on the topics listed in the content guide column.  Jacob, Francone, Lossow, Structure and Function in Man, pages 548-9 "Burns"  Kozier and Erb, Fundamentals of Nursing, pages 196 "Edema)  621 638-9 642-3 700-708 716-35 910-11  Brunner/Suddarth, Textbook of Medical-Surgical Nursing, pages 118-132 135 |
|  | convulsions numbness, tingling of fingers & toes cardiac arrest changes in resp (Kussmal & ↓) cramps headache anorexia, nausea lung congestion (pulmonary edema covered in O₂ and circ)  | 137-8<br>608-9 "Edema"<br>893-911<br>913-917<br>920-923<br>927-951<br>1082-1099   |

## Pathology and Therapeutics

Fluids and Electrolytes

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|---|---|---|
| 3. Relate ineffective Fluids and Electroly responses to common health problems of Canadians.  4. Describe the stimuli which commonly result in adaptive and ineffective responses in Fluids and Electrolytes. | abd distentention (ascites) distended veins peripheral edema (eyes, feet, hands e muscle rigidity or flaccidity   | Whaley and Wong, Nursing Care of Infants and Children, pages 941-2 "Intravenous Administration" 1061-91 1096-1104 1107-1108 1112-1131 1144-1184 1349 Paragraph on Edema  Reeder/Mastroianni/Martin, Maternity Nursing, pages 209 "Adrenals" 235 "Avoiding Hyperventilation" 248-9 "Salt Intake" 270-1 "Urine Test" & "Instructions to Patients" |
| In Describe seed a produce - chees to Figure 1997 at a con-   | renal di sease ( output) ↑ or ↓ aldosterone replacing H <sub>2</sub> O but not Na. ↓ or ↑ intake of electrolytes (Na,   | K, Ca)  |
|   | stress and anxiety admin of adrenal cortical hormone loss of gastric jc and intestinal (vomiting, diarrhea) ↑ or ↓ parathormone alkalosis and acidosis prolonged immobilization Vit D intoxication Ca of bone excessive alkali intake ↓ in elimination of CO2 |   |

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| offects of masteations would from a state from a state from the state of the first and the state of the state | ↑ intake of CO <sub>2</sub> drugs † depress medulla CNS disturbances of resp. center inacurrate regulation of respirator hyperventilation ↓ O <sub>2</sub> |                     |
| <ol> <li>Explain the relationship of the stimuli<br/>to the adaptive and ineffective response<br/>of Canadians with common problems of<br/>Fluids and Electrolytes.</li> </ol>   | Relate responses to physiological mode (other needs), self concept, role function and interdependence modes  |                     |
| 6. Describe the Fluid and Electrolyte functions which are affected by adaptive and ineffective responses and the relaxed stimuli.  | neuromuscular responses kidney function respiratory function   |                     |
| <ol> <li>Explain the diagnostic measures employed<br/>in identifying common Fluids and<br/>Electrolytes problems.</li> </ol>   | Review from Yr. I Na, K, Ca blood normals p CO <sub>2</sub> , pO <sub>2</sub> , pH blood normals normal urine contents                                     |                     |
|  | Review from Intro Patho.<br>biopsy   |                     |
| OE PSCLOARS,   | E.S.R.<br>ultrasound   |                     |
|  | Diagnostic Tests from this unit:   |                     |
|  | Blood - creatinine creatinine clearance non-protein nitrogen urea nitrogen (BUN) p.CO <sub>2</sub> , pO <sub>2</sub> ph inorganic phosphorus               |                     |

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|---|---|---------------------|
|   | Urine - (glomerular function tests)       |                     |
|   | insulin clearance                         |                     |
|   | creatinine clearance                      |                     |
| Electrolytes problems.                  | osmolarity                                |                     |
| in identifying cosmon Fluids and        | protein                                   |                     |
| Explain the diagnostic measures employe | Na, K                                     |                     |
|   | Other - I.V.P.                            |                     |
|   | Renal biopsy                              |                     |
| Describe the use of dietary therapy     | Dialysis diet                             |                     |
| to promote adaptation of Canadians      | Restricted flds.                          |                     |
| with problems of Fluids and             | Lo and Hi protein                         |                     |
| Electrolytes. The common brootens of    | Lo K or Hi K                              |                     |
| to the adaptive and inaffective respons | Lo Na (other peeds), self concept,        |                     |
|   | Relate responses to physiological         |                     |
| Describe the use, actions and side      | Types and contents of I.V. solutions      |                     |
| effects of medications which promote    | commercial dialyzing flds.                |                     |
| adaptation related to Flds and          | meds when on dialysis                     |                     |
| Electrolytes.                           | duiretics - all kinds                     |                     |
|   | Antiduiretics on passes of passes course  |                     |
|   | Sodium polystyrene sulfonate (Kayexalate) |                     |
|   | Sorbitol                                  |                     |
|   | Immunosuppressive drugs                   |                     |
| OBJECTIVES .                            | Anti inflammatories - done in Intro       |                     |
|   | Antibiotics - done in Reg - temperature   |                     |
|   | Anticoagulants will be done in O2 and     |                     |
|   | Circ.                                     | ,                   |
| Describe therapeutic measures           | Surgery - kidney removal                  |                     |
| initiated by other health care pro-     | - shunts and fistulas                     |                     |
| fessionals in promoting adaptation of   | - skin grafting (burns)                   |                     |
| Canadians with common health problems   | Hemodialysis                              | hells a             |
| related to Flds and Electrolytes.       | Peritoneal Dialysis                       |                     |
|   | Paracentesis                              |                     |

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|---|--|---------------------|
| 1. Describe general therapeutic measures' which promote adaptation related to Flds and Electrolytes | Elevation of limb H.T. re dietary intake Activity                    |                     |
| 2. Discuss other therapeutics which are currently being researched                                  | Kidney transplants Tissue typing Drugs for combating rejection Burns |                     |
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