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| Ministry of Higher Education & Scientific Research  Foundation of Technical Education  Learning Package in field of      Geriatric Needs  Unit 1  ( week 1, 2, 3,4 ,5 and 6)  Presented to the second class students  Of  Institute of Medical Technology - Baghdad  Department of Welfare of People with Special Needs    Designed by  **Dr. Sameer Abdul-Wahid**  2011-2012 |

This teaching packay updated by Mr. Noor Mohamed 2016

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| 1. **Over View**   1. Target Population  This learning package had been designed to the second class students in  the Department of Welfare of People with Special Needs of the Institute of Medical Technology - Baghdad |

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| 2. Rationale  This unit will aid those who want to learn the basic geriatric needs concepts that apply to the health field.  It is also intended for students who have little or no science  background . |

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| 1. Central Ideas     **Geriatric physiotherapy**  **3-1Definition**  3-2 **Cardiovascular disease**  3-3 **Central nervous system diseases**  3-4 **Alimentary disease**  3-5 **Dietary disorders**  3-6 **Diabetes**  3-7 **Anaemias**  3-8 **infections**  3-9 **Disorders of homeostasis**  3-10 **Eye disease**  3-11 **Hearing disorder**  3-12 **Musculoskeletal disorders**  3-13 C**ommon fractures and**  **3-14 Causes of falls**  3-15 **Urinary incontinence**  3-16 **Parkinson’s disease** |

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| 4. Instructions  4-1 Study the over view carefully.  4-2 Learn briefly the modular unit of this package.  4-3 Perform the pre-test of this unit  \* If you get 9 degree, or more. You will not need to learn this  modular unit. In this case you must contact with your  teacher to inform him about your results.  \* But when you get less than 9 degree in this test . you will need to continue learning this modular unit. |

4-4 After you study this modular unit

You have to perform the post-test of this unit

\* If you get 9 degree, or more. You must go to learn the second

modular unit.

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same unit in order to learn and understand the steps which

you need.

\* After you complete the studying , perform the post-test

examination again for checking.

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| B. Performance Objectives    After studying this modular unit, you should be able to know the  **Geriatric physiotherapy**  **3-1Definition**  3-2 **Cardiovascular disease**  3-3 **Central nervous system diseases**  3-4 **Alimentary disease**  3-5 **Dietary disorders**  3-6 **Diabetes**  3-7 **Anaemias**  3-8 **infections**  3-9 **Disorders of homeostasis**  3-10 **Eye disease**  3-11 **Hearing disorder**  3-12 **Musculoskeletal disorders**  3-13 C**ommon fractures and**  **3-14 Causes of falls**  3-15 **Urinary incontinence**  3-16 **Parkinson’s disease** |

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| **C . Pre-test**     1. Enumerate the gastrointestinal problems in old persons?.   3. what are the eye problems in old? |

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| D. The modular unit of this package    **Geriatric physiotherapy**  **3-1Definition**  **Definition**  The branch of physiotherapy dealing with the remedial ,social and preventative aspects of the elderly disabled and disadvantaged |

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| **Geriatric physiotherapy**    3-2 **Cardiovascular disease**    1-myocardial infarction  2- angina pectoris  3-intermittent claudication  4-gangren.chronic leg ulcers  5-hypertension  6-postural hypotension  7-heart valve disorders  8-varicose veins  9-varicose ulcers  10-deep venous thrombosis  11-congestive cardiac failure |

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| **Geriatric physiotherapy**    3-3 **Central nervous system diseases**  1-cerebral atherosclerosis  2-carotid region syndromes  a-transient ischemic attacks(TIA)  b-thrombosis  c-embolism  d-hemorrhage  3-vertebro-basilar region syndromes  a-TIA  b-thrombosis  c-embolism  d-hemorrhage  e-drop attacks  f-cervical spondylosis  4-parkinsonism  . |

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| **Geriatric physiotherapy**  3-4 **Alimentary disease**  1-hiatus hernia  2-diverticulosis  3-peptic ulcer  4-malabsorption  5-carcinoma-oesiophagus,stomch,colon,rectum  common alimentary symptoms  1-constipation  2-dysphagia |

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| **Geriatric physiotherapy**    3-5 **Dietary disorders**    1-scurvy (vitamin C deficiency)  2-pellagra (vitamin B complex deficiency)  3-vitamin B12 deficiency  4-vitamin D deficiency  5-folate deficiency  6-iron deficiency  7-obesity-very common  8-protein deficiency |

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| **Geriatric physiotherapy**    3-6 **Diabetes**    1-mainly adult onset  2-ulcers  3-neuropathy |

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| **Geriatric physiotherapy**    3-7 **Anaemias**  1-iron deficiency  2-megaloblastic  3-of chronic disease  a-chronic renal failure (uremia)  b-rheumatoid  c-bowel disease  d-infected ulcer and pressure sores  e-tuberculosis |

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| **Geriatric physiotherapy**    3-8 **infections**  1-pneumonia  2-urinary tract infections  3-tuberculosis |

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| **Geriatric physiotherapy**    3-9 **Disorders of homeostasis**  1-electrolyte imbalance  a-hypokalaemia (often from use of diuretics)  b-hyponatraemia  2-hypothermia  3-hyperthermia |

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| **Geriatric physiotherapy**    3-10 **Eye disease**  **Eye disease**  1-glaucoma  2-cataract  3-diabetic retinopathy  4-optic lesions following stroke |

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| **Geriatric physiotherapy**  3-11 **Hearing disorder**  **Hearing disorder**  1-nerve deafness  2-bone conduction deafness |

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| **Geriatric physiotherapy**  3-12 **Musculoskeletal disorders**  **Musculoskeletal disorders**  1-osteoarthritis  2-rheumatoid arthritis  3-rare collagen diseases e.g. SLE, dermatomyositis  4-paget disease  5-osteomalacia  7-tumours  8- back pain  a-osteoporosis  b-osteomalacia  c-paget diseases  d-prolapsed disc  e-tumor |

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| **Geriatric physiotherapy**  3-13 C**ommon fractures and**  1-femoral neck  2-femoral intertrchantric and subtrochantric  3-neck of humeros  4-colles |

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| **Geriatric physiotherapy**  **3-14 Causes of falls**    **Causes of falls**  1-cerebral  a-drop attacks  b-TIA  c-epilepsy  d-faints  2-cardiovascular  a-postural hypotension  b-stokes-Adams attacks |

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| **Geriatric physiotherapy**    3-15 **Urinary incontinence**  1-stress incontinence  2-unstable bladder  3-senile vaginitis  4-chronic bacteruria  5-carcinoma of bladder  6-prostatic hyper trophy  7-neurogenic bladder  . |

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| **Geriatric physiotherapy**  3-16 **Parkinson’s disease**  **Etiology**  1-idiopathic  2-toxic-manganeses ,copper, carbon monoxide  3-drugs-phenothiazines, ,methyl dopa  4-metabolic-wilsons disease  5-repeated trauma  6-post encephalitis  7-arteriosclerotic  **Signs and symptoms**  1-tremor-pill rolling  2-rigidity- lead pipe and cogwheel  3-bradykinesia  4-hypokinesia  5-defective postural reflexes  6-lack of facial expression-parkinsonian faces  7-shuffling gait –  8-difficulty with starting and stopping walking  9-autonomic symptoms  a-excessive salivation  b-flushing  c-feels hot  10 –stretch reflexes-may be increased  treatment  1-drug therapy  a-L dopa  b-l dopa plus carbidopa  c-anticholinergics  d-amantadine  e-pencillamine in wilsons disease and toxic parkinsonism  2-surgery-steriotactic surgery to basal ganglia  3-physiotherapy  a-assess for  a-contractures  b-altered muscle tone  c-reduced joint range  b-treatment  a-passive movement  b-active exercises  c-relaxation exercises  d-reduce contractures  c-schedule  a-passive movements .slow, rhythmical and full range  b-active exercises  assisted free or resisted  ,sling exercise  ,manually resisted exercises  ,spring exercises  c-relaxation exercises  pendular and rhythmical  sling exercises  strengthening weakened muscles  passive movements  active movemen |

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| **C. Post-test**       1. Enumerate the gastrointestinal problems in old persons?.   2. what are the eye problems in old? |

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| **Key of Answers for the first modular unit of learning package**    Answers of the performance objectives questions.  **Pre-test and**  **Post-test**  1. common alimentary symptoms  1-constipation  2-dysphagia  2. **Eye disease**  1-glaucoma  2-cataract  3-diabetic retinopathy  4-optic lesions following stroke |

**References**

Krussen text book of medical rehabilitation

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| Ministry of Higher Education & Scientific Research  Foundation of Technical Education  Learning Package in field of      Geriatric Needs  Unit 2  ( week 7, 8, 9,10 ,11 and 12)  Presented to the second class students  Of  Institute of Medical Technology - Baghdad  Department of Welfare of People with Special Needs    Designed by  **Dr. Sameer Abdul-Wahid**  2011-2012 |

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| 1. **Over View**   1. Target Population  This learning package had been designed to the second class students in  the Department of Physiotherapy of the Institute of Medical Technology - Baghdad |

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| 2. Rationale  This unit will aid those who want to learn the basic neurological  rehabilitation concepts that apply to the health field.  It is also intended for students who have little or no science  background . |

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| 1. Central Ideas     **Hemiplegia**  3-1 Common causes  **Cerebrovascular disease** infarction  3-1-a Contributing factors  3-1-b common sites  3-1-c Onset  3-2 **Cerebrovascular disease** haemorrhage  3-2-a **common site** and Onset  3-3 other causes  3-4 Signs and symptoms  3-5 Principles of physiotherapy  3-6 **Common complications** |

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| 4. Instructions  4-1 Study the over view carefully.  4-2 Learn briefly the modular unit of this package.  4-3 Perform the pre-test of this unit  \* If you get 9 degree, or more. You will not need to learn this  modular unit. In this case you must contact with your  teacher to inform him about your results.  \* But when you get less than 9 degree in this test . you will need to continue learning this modular unit. |

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you need.

\* After you complete the studying , perform the post-test

examination again for checking.

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| B. Performance Objectives    After studying this modular unit, you should be able to know about  **Hemiplegia**  3-1 Common causes  **Cerebrovascular disease** infarction  3-1-a Contributing factors  3-1-b common sites  3-1-c Onset  3-2 **Cerebrovascular disease** haemorrhage  3-2-a **common site** and Onset  3-3 other causes  3-4 Signs and symptoms  3-5 Principles of physiotherapy  3-6 **Common complications** |

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| **C . Pre-test**    1. Enumerate the Contributing factors for hemiplegia.  .  2. What are the **Common complications** of Hemiplegia ? |

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| D. The modular unit of this package    **Hemiplegia**  3-1 Common causes  **1. Cerebrovascular disease**   1. infarction   1-thrombosis  2-embolus  a-from heart-e.g. myocardial infarction,fibrillation  b- from atheromatous plaques in other vessels infection accounts for over 60 per cent of all hemiplegia |

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| **Hemiplegia**    3-1-a Contributing factors  1-disease of vessels-atheroma ,arteitis  2-diseases of blood –aneemia, polycythaemia  3-disorders of blood flow –reduced cardiac output ,e.g. syncope myocardial infection, arrhythmia |

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| **Hemiplegia**    3-1-b common sites   1. internal carotid artery 2. middle cerebral artery 3. anterior cerebral artery 4. posterior cerebral artery |

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| **Hemiplegia**  3-1-c Onset  Develops over minutes or hours, not generally associated with activity and may occur during sleep  Infarction-obstructs the blood supply to the area of the brain producing ischemia and anoxia distally and consequence |

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| **Hemiplegia**    3-2 **Cerebrovascular disease** haemorrhage    1- from normal vessels  a-hypertension  2-from abnormal vessels  a-aneurysm  b-angioma |

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| **Hemiplegia**  3-2-a **common site** and Onset  Middle cerebral artery  Onset  Sudden with severe headache leading rapidly to loss of consciousness may be associated with emotion or strenuous activity .Hemorrhage at the site of the lesion causes compression and disruption of brain tissue |

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| **Hemiplegia**  3-3 other causes  1. Space occupying lesions  1-tumour  2-abscess  2. Trauma- head injury  Degree of damage depends on :  1-severity of lesion  2-site of lesion  3-state of collateral circulation  Hemiplegia occurs more commonly in the middle aged and elderly and therefore assessment of co- existing pathology may also be necessary. |

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| **Hemiplegia**  3-4 Signs and symptoms  Signs and symptoms  Any or all of the following may be found :  1-altered level of consciousness  2-distubance in communication  3-disturbance in postural tone  4-loss of voluntary movement  5-sensory dysfunction  6- visual disturbance  7-intellectual impairment  8-preceptual disorders  9-incontinence |

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| **Hemiplegia**  3-5 Principles of physiotherapy  1-maintain airway and ensure adequate ventilation by:  a-breathing exercises  b-postural drainage  c-vibration  d-assisted coughing  2- inhibit development of abnormal patterns of reflex activity  by:  a-positioning to produce reflex inhibition  b-reflex inhibiting movement patterns  3-establish communication  4-increase sensory stimulus by:  a-weight bearing through limbs  b-afferent coetaneous stimuli  5- maintain joint range and muscle length by:  a-passive movement  b- assisted active movement  6- develop normal tone  a-functional movement in a developmental sequence  b-weight transference techniques  c-development of isolated joint movement in a  proximal to distal sequence  d-development of the ability to place the limb in space  e- use of afferent coetaneous stimuli  7-develop balance reactions  a-functional movement in a developmental sequence  b-weight transference techniques  c-development of isolated joint movement in a proximal  to distal sequence  d-development of the ability to place the limb in space  e- use of afferent coetaneous stimuli  8- facilitate voluntary movement  9- re-educate functional activity by:  the choose and adaptation of activity of daily living  living in order that they do not conflict with other principles of treatment |

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| **Hemiplegia**    3-6 **Common complications**    1. Painful shoulder  2. Edematous hand  3. Persistent instability of the ankle |

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| **C. Post-test**    1. Enumerate the Contributing factors for hemiplegia.  .  2. What are the **Common complications** of Hemiplegia ? |

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| **Key of Answers for the first modular unit of learning package**    Answers of the performance objectives questions.  **Pre-test and**  **Post-test**  1. a Contributing factors  1-disease of vessels-atheroma ,arteitis  2-diseases of blood –aneemia, polycythaemia  3-disorders of blood flow –reduced cardiac output ,e.g. syncope myocardial infection, arrhythmia    2. 6 **Common complications**    1. Painful shoulder  2. Edematous hand  3. Persistent instability of the ankle |

**References**

Krussen text book of medical rehabilitation

**Ministry of Higher Education & Scientific Research**

**Foundation of Technical Education**

**Ministry of Higher Education & Scientific Research**

**Foundation of Technical Education**

**Learning Package in field of**

**Geriatric Needs**

**Unit 3**

**( week 13, 14, 15,16 and 17)**

**Presented to the second class students**

**Of**

**Institute of Medical Technology - Baghdad**

**Department of Welfare of People with Special Needs**

**Designed by**

**Dr. Sameer Abdul-Wahid**

**2011-2012**

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| 1. **Over View**   **1. Target Population**  **This learning package had been designed to the second class students in**  **the Department of Physiotherapy of the Institute of Medical Technology - Baghdad** |

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| **2. Rationale**  **This unit will aid those who want to learn the basic neurological**  **rehabilitation concepts that apply to the health field.**  **It is also intended for students who have little or no science**  **background .** |

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| 1. **Central Ideas**     **Spinal cord lesions**  **3-1 Clinical presentation**  **3-2 Early complications of cord injury**  **3-3 Complications of paralysis**  **3-4 Late complications**  **3-5 Early treatment of spinal cord lesions**  **3-6 physiotherapy for the acute lesion**  **3-7 Physiotherapy for the early ambulant patient.** |

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| **4. Instructions**  **4-1 Study the over view carefully.**  **4-2 Learn briefly the modular unit of this package.**  **4-3 Perform the pre-test of this unit**  **\* If you get 9 degree, or more. You will not need to learn this**  **modular unit. In this case you must contact with your**  **teacher to inform him about your results.**  **\* But when you get less than 9 degree in this test . you will need to continue learning this modular unit.** |

**4-4 After you study this modular unit**

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**examination again for checking.**

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| **B. Performance Objectives**  **Able to know about Spinal cord lesions**  **3-1 Clinical presentation**  **3-2 Early complications of cord injury**  **3-3 Complications of paralysis**  **3-4 Late complications**  **3-5 Early treatment of spinal cord lesions**  **3-6 physiotherapy for the acute lesion**  **3-7 Physiotherapy for the early ambulant patient.** |

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| **C . Pre-test**     1. **Enumerate the Complications of paralysis.**   **2. Enumerate the Late complications.** |

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| **D. The modular unit of this package**    **Spinal cord lesions**  **3-1 Clinical presentation**  **Can be a complete or partial transaction**  **Clinical presentation**  **1- Paralysis**  **a- tetraplegia at cervical levels**  **b- paraplegia at lower levels**  **can be flaccid or spastic depending on site of lesion.**  **2- Sensory loss (deep and superficial)**  **3- Incontinence (bowel and bladder)**  **4- loss of vaso-motor response, and**  **5- Sexual function-impotence in the male.** |

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| **Spinal cord lesions**  **3-2 Early complications of cord injury**    **Early complications of cord injury**  **1-General and spinal shock.**  **2-Pain.**  **3-D.V.T.**  **4- pulmonary embolism**  **5-Respiratory failure in high lesions.** |

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| **Spinal cord lesions**    **3-3 Complications of paralysis**  **Complications of paralysis**  **1-respiratory impairment (paralysis of intercostals and**  **abdominal muscles).**  **2-Contractures which are painful.**  **3-immobility.**  **4-loss of independence.** |

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| **Spinal cord lesions**    **3-4 Late complications**    **Late complications**  **1-pressure sore.**  **2-respiratory infection.**  **3-urinary tract infection.**  **4-peri articular ossification-especially of shoulder and hip joints.**  **5- depression.** |

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| **Spinal cord lesions**    **3-5 Early treatment of spinal cord lesions**    **1- care for bowel and bladder management.**  **2- tracheostomy and ventilation for patients with high lesions and**  **respiratory impairment.**  **3- good bed posture and regular change of position to**  **1-prevent contractures**  **2-minimize spasticity**  **3-prevent pressure sores**  **4- application of splints to prevent contractures ,**  **feet supported at 90 0 with padded foot board .**  **metacarpal joints splinted at 90 0flexion with interphalangeal**  **joints extended and thumb in opposition** |

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| **Spinal cord lesions**    **3-6 physiotherapy for the acute lesion**  **Assessments is essential before treatment**  **Examination of the following:**  **1-muscle noting**  **a-spasticity**  **b-flaccidity**  **c-muscle imbalance**  **d-reflex responses**  **e-muscle shortening**  **f- contractures**  **2- joints noting**  **a- range**  **b-contractures**  **3- respiratory function**  **a- test vital capacity**  **b-observe intercostals , diaphragmatic and abdominal**  **movement and action of accessory breathing muscles .**  **c-examine for secretions in the lungs.**  **Treatment**  **1-respiratory physiotherapy**  **2-passive movements**  **3-facilitation of movement as recovery is observed** |

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| **Spinal cord lesions**  **3-7 Physiotherapy for the early ambulant patient.**  **(adapted to each patient according to level of cord lesions)**  **Re-education of movement**  **1-inhibitory techniques for muscle spasm**  **2-facilitation of muscle action**  **3-strengthening muscle.**  **Training in independence**  **1-sitting up and lying down**  **2-turning over in bed**  **3-balance in sitting**  **4-dressing**  **5-washing**  **6-feeding**  **Training in self care**   1. **to prevent pressure sore and trauma to skin** 2. **methods of relieving pressure**   **Progression of treatment**  **1-progressive resistance exercises**  **2-mat work**  **3-hydrotherapy.**  **Training in independence**   1. **transfers to and from wheelchair, car, lavatory ,bed, etc.** 2. **wheelchair activities** 3. **standing from wheelchair** 4. **balance in standing** 5. **application of caliper** 6. **gait training**   **Training in self care**  **Bladder and bowel training**  **Training in preparation for home**  **1-involvement of the family in rehabilitation**  **2-home visits for short periods initially**  **3-the occupational therapist will assess and recommend**  **adaptations to home and supply appropriate aids.** |

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| **C. Post-test**     1. **Enumerate the Complications of paralysis.**   **2. Enumerate the Late complications** |

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| **Key of Answers for the first modular unit of learning package**    **Answers of the performance objectives questions.**  **Pre-test and Post-test**  **1. Complications of paralysis**  **1-respiratory impairment (paralysis of intercostals and**  **abdominal muscles).**  **2-Contractures which are painful.**  **3-immobility.**  **4-loss of independence.**  **2. Late complications**  **1-pressure sore.**  **2-respiratory infection.**  **3-urinary tract infection.**  **4-peri articular ossification-especially of shoulder and hip joints.**  **5- depression.** |

**References**

**Krussen text book of medical rehabilitation .**