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**Question1. what is the difference between Parkinson and parkinsonism?**

Parkinson disease is a disease that slowly damages the central nervous system. the central nervous system is made up of brain and spine. when a person gets Parkinson disease the cells that make dopamine in a part of the brain die. Parkinson disease is a disease that worse over time.

Parkinsonism: is a general term that refers to a group of neurological disorders that cause movement problems similar to those seen in Parkinson disease such as tremors , slow movement and stiffness.

**Primary and secondary clinical features of PD:**

**Primary features**

1. Resting tremors
2. Bradikinesia
3. Rigidity
4. Postural abnormalities
5. Masked face
6. Abnormal gait

**Secondary features**

1. **Psychological problems**
2. **Personality problems**
3. **Autonomic disturbances**
4. **Sensory problems**
5. **Sleep disturbances**
6. **Speech problems**
7. **Micrographia**
8. **Cough**
9. **Sialorrhea**

**:**

**Physical therapy management of Parkinson patients:**

**GOALS:**

* **Maximize patient independence**
* **Regain patient functional potential**
* **Minimize secondary complications**
* **Regain physical fitness**
* **Minimize deformity chances**
* **Conserve energy .**

**MODES:**

* **Exercises**
* **Assistive devices**
* **Generalized home based rehabilitation programs**
* **Group training**
* **Energy conservation techniques.**

**EXERCISES:**

**GOALS:**

1. **Maintain joint integrity**
2. **Maintain muscle**
3. **Strength**
4. **Flexibility**
5. **Endurance .**

**MODES:**

1. **Strengthening exercises**
2. **Stretching exercises**
3. **Flexibility exercises**
4. **Balance exercises**
5. **Breathing exercises**
6. **Facial mobility exercises**
7. **Range of motion exercises**
8. **Coordination exercises .**
* **STRENGTHENING EX: of all weakened muscles**
* **BALANCE EX: maintain balance**

**Prevention of fall .**

* **RELAXATION EX: diaphragmatic breathing exercises , yoga .soft music.**
* **STRECHING EX: for shortened muscles especially**

**Trunk flexors Hip and knee flexors , neck flexors , shoulder internal rotators and adductors.**

**HYDROTHERAPY :**

**GOALS**

**Strengthening**

**Relaxation**

**Balance**

**TREMORS MANAGEMENT :**

**Modes:**

* **Proper sleep**
* **Putty squeezing**
* **Complete relaxation**
* **Fist making**

**MASKED FACIAL MANAGEMENT**

**Modes:**

* **Mirror therapy**
* **Practical of facial expresions like:**
* **Surprise**
* **Displease**
* **Furrowing**
* **Nose wrinkling**
* **Smiling .**

**MICROGAPHIA MANAGEMENT :**

* **Usage of weighted pens**
* **Wrapping of tape for additional grip**
* **Use of typewriter and keyboard typing in later stages.**

**GAIT MANAGEMENT :**

**Modes:**

* **Perform purposeful targeted movement**
* **Walking on cue cards , floor markings and blocks**
* **Treadmill walking**
* **Walk with long stepped gait having broad base**
* **Always walk with arm swing in marching style**
* **CUES:**
* **Verbal (music , counting)**
* **Auditory**
* **Visual (step,watching)**

 **POSTURAL MANAGEMENT :**

* **Modified walls and corner push ups**
* **Bilateral upper limb wall slides**
* **Leaning forward with palms towards walls with arms over head and feet away from walls**
* **Back and head with wall from posterior side while shoulder blades with wall and chin tuck in.**

**AEROBIC CONDITIONING:**

* **Flexibility exercises**
* **Head turns and tilting**
* **Ankle circling in air**
* **Neck and trunk twisting**
* **Walking**
* **Walking**
* **Stationary bicycling**
* **Recreational activities :**
* **Dancing .**

**ADL MODIFICATIONS:**

* **Properly planned short**
* **Interval important task doing to avoid fatigue weakness and energy conservation**
* **Proper sleeping**
* **Transfer techniques**
* **Dressing and grooming**
* **Eating and writing**
* **Bathing and toileting .**

**PREVENTING FALLS:**

**Do not pivot your body over your feet when turning instead try:**

**U turns …while walking**

**CLOCK TURN: clock turn is useful in small areas and for when you are stopped and must turn. Start at 12 pm and take slow steps to 3pm and so on.**

**AVOID WALKING BACKWARDS**

**Try:**

* **Stepping sideways**
* **Side step arc technique is useful in small spaces and as way to avoid stepping**
* **Backwards …take slow side arc.**

**ASSISTIVE DEVICES :**

* **Sticks**
* **Frames**
* **Weighted walkers**
* **Avoid tripod canes and use one point cane.**

**Q2:ALL body movements are controlled by brain which is also called control center, brain have different parts and lobs ,elaborate different lobes of brain and also explain functions of different lobes?**

**LOBES OF BRAIN :**

* Parietal lobe
* Occipital lobe
* Frontal lobe
* Temporal lobe

**FUNCTIONS OF BRAIN LOBES:**

***PARIETAL LOBE*:**

Touch perception

Movement control

Manipulation of objects

**OCCIPITAL LOBE**

Visual reception

Local orientation

Shape perception

**FRONTAL LOBE:**

Voluntary movement

Planning

Intellect

Problem solving

Abstract reasoning

**TEMPORAL LOBE:**

Long term memory

Speech comprehension

Objects perception

Faces recognition

Hearing .

**Q3:EXPLAIN STROKE AND TYPES OF STROKE?**

**DEFINITION**

A stroke occurs when the blood supply to part of the brain is interrupted or reduced, preventing brain tissue from getting oxygen and nutrients. Brain cells begin to die in minutes.

A stroke is a medical emergency and prompt treatment is crucial .early action can reduce brain damage and other complications.

**Types of stroke :**

1. Ischemic stroke (clots)
2. Hemorrhagic stroke(bleeds)
3. TIA(transient ischemic attack ).
* **Ischemic stroke :**

Occurs when a blood vessel supplying blood to the brain is obstructed .

It accounts for 87 percent of all strokes.

* **Hemorrhagic stroke :**

Occurs when a weakened blood vessel ruptures . the two main types of weakened blood vessels that usually cause hemorrhagic strokes are :ANEURYSMS and ARTERIOVENOUS MALFORMATION(AVMs) . The most common cause of hemorrhagic stroke is uncontrolled high blood pressure.

* **TIA(TRANSIENT ISCHEMIC ATTACK):**

Called a mini stroke , it is caused by a serious temproray clot. This is a warning stroke and should be taken seriously .

**a):What are neurological complications and associated conditions in stroke?**

* Altered consciousness
* Sensory deficits
* Motor deficits
* Disorders of speech and language (dysarthria)
* Dysphagia
* Cognitive dysfunction
* Altered emotional status
* Perceptual dysfunction
* Seizures
* Bladder and bowel dysfunction
* Cardiovascular and pulmonary dysfunction
* Deep venous thrombosis and pulmonary embolus
* Osteoporosis and fractures risk.

**b):write down the physical therapy intervention in stroke patients ?**

* improve motor control
* use several different techniques for sensory stimulation to facilitate movement.
* Learning theory approach
* Conductive education and motor relearning theory
* Functional electrical stimulation
* Help restore motor control , spasticity and hemiplegia
* Biofeedback
* Limb physiotherapy
* Use of assistive and passive care devices
* Other treatment includes:
* Tone management , sensory re -education , balance retraining, fall prevention , gait re-education ,functional mobility training.