**Pathology Assignment**

**By Zohra Abbas**

**ID 13823**

**Submitted to Ma’am Maria**

Question no 1

Answer: **PT for osteoporosis patient**

It’s one of the most common bone weakening disorder of women above age 50,and may lead tom disability if precatory measures are not taken on time .

The aim of PT program should to avoid the complications related to disease and to strengthen the bone in every possible way.

So prior to start the program fitness and bone density of the individual should be assessed, to understand that how much weight patient can bear and what endurance exercises should be given

Keeping the common affected sites in mind exercise should increase the muscle strength of upper trunk , improve balance, decrease the complication of pain and prevent fall and fracture. So,

**“BASE”** exercise should be given

**B = Balance exercise**

**A = Aerobic exercise  
S = Strengthening exercise  
E = Endurance exercise**

**1, Balance exercise:**

Tai chi and one leg rise exercises are helpful in balance and coordination which may prevent the patient from fall and similarly from fracture and immobility.

**2**, **Aerobic exercise:**

Aerobic exercises are beneficial because the is lead risk of injury or fall, more over due to hydrostatic pressure blood moves toward center and thus proper blood supply to every organ, weight bearing exercise are also easily performed on water due to buoyancy property of water, walking in water etc

**3, strengthening exercise:**

Holding stable chair, flex one knee (hamstring strengthening)

Wall pushups (8-20 rep)

Squat for spine(shoulder, hip, head supported by wall and tuck-in tommy so that spine flattens)

Right leg up, right leg down on stairs (1min)

**4, Endurance exercise:**

Jogging, slow walking, dancing, swimming etc

Being a PT we must avoid twisting and bending exercises like hand to toe.

High intensity running, jumping,

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**Question no 2**

**Answer: DIFFERENCE**

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| **OSTEOPOROSIS** | **OSTEOMYELITIS** | **OSTEOMALACIA** |
| **Definition**  1,Metabolic bone disorder in which bone becomes porous due to the decrease of bone density | It’s a bone/bone marrow inflammatory condition | A disorder in which bone softening occurs |
| 2,**Caused** due to VT D deficiency | **Caused** by Staphylococcal bacteria | **Caused** due to calcium and phosphorus deficiency |
| **3,S/S**  its pain free untilfracture occurs  stoop posture  back pain in sever case | **S/S**  Fever  Pain  Redness at the site of infection  Inflammation and warmth | **S/S**  Muscle weakness  Joint and bone pain  Dull ache  Walking difficulty |
| **COMMON SITE:**  Hip, spine, wrist and shoulder | Adults =vertebra, clavicle, pelvis.  Infant= long bone metaphysis | Lower back, pelvis, hips, ribs, |
| **AGE AND GENDER:**  Mostly women above 50 | Children and teens  Its equal in both genders | Child and adults |
| **TYPES:**  Type I and Type II | Hematogenous osteomyelitis  Vascular insufficiency osteomyelitis  Pyogenic(acute and chronic)  etc | VT D deficient  Hypophosphatemia |
| **DIAGNOSTIC TEST:**  DXA scan bone density of hip and spine is measured | + bacterial culture,  MRA(greater fluid in bone) | Elevated phosphorus in blood test,  Increased alkaline phosphatase |

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