Musculoskeletal Disorders

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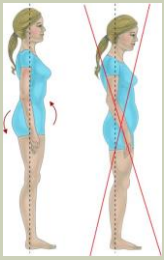
BACK PAIN

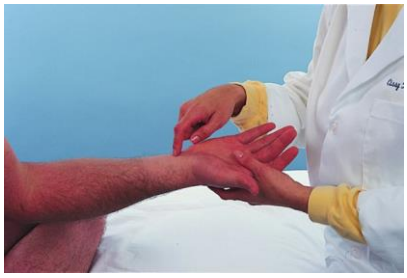
- Etiologies
- S/S
- Dx
- Treatment/ Management
  - Pain
  - Exercise
  - Body mechanics
  - Work Modifications
  - Stress reduction
  - Weight management



UPPER EXTREMITY DISORDERS

- Bursitis & Tendonitis
- Loose Bodies
- Impingement Syndrome
- Carpal Tunnel Syndrome
- Ganglion
- Dupuytren's Contracture

Tinel Sign: Assessment of Carpal Tunnel Syndrome



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Nursing Care of the Patient Undergoing Surgery of the Hand or Wrist

- Surgery is usually an outpatient procedure
- Patient education is a major nursing need for a patient undergoing outpatient surgery
- Neurovascular assessment is vital; every hour for the first 24 hours, assess motor function only as prescribed; instruct patient in signs and symptoms to assess and report
- Pain control measures: medication, elevation, intermittent ice or cold
- Prevention of infection: keep dressing clean and dry, wound care, signs and symptoms of infection
- Assistance with ADLs and measures to promote independence

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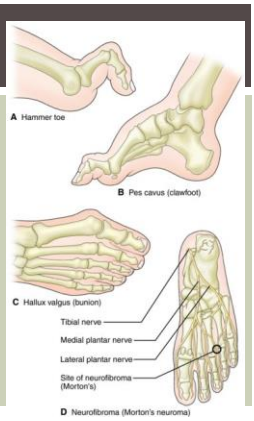
FOOT PROBLEMS

- Callus
- Corn
- Hallux valgus (bunion)
- Hammer toe
- Ingrown toenail
- Morton's neuroma
- Clawfoot: pes cavus
- Flatfoot: pes planus
- Plantar fasciitis



Nursing Process: The Care of the Patient Undergoing Foot Surgery— Interventions #1

- Neurovascular assessment is vital
  - Assess swelling and neurovascular status every 1 to 2 hours for the first 24 hours
  - Instruct patient in signs and symptoms to assess and report
- Reliving pain
  - Elevate foot
  - Use of intermittent ice
  - Medications; oral analgesics

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Nursing Process: The Care of the Patient Undergoing Foot Surgery— Interventions #2

- Improving mobility
  - Instruction in weight-bearing restrictions as prescribed
  - Use of assistive devices (crutches or walker)
  - Measures to ensure patient safety
- Measures to prevent infection
  - Wound or pin care
  - Keep dressing clean and dry
  - Signs and symptoms of infections
- Patient education

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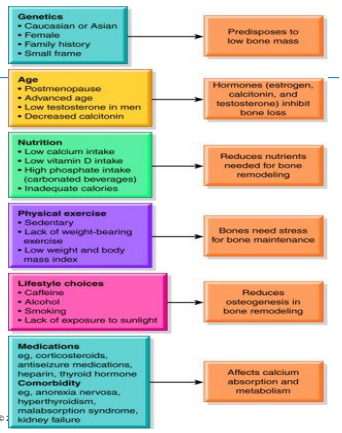
Risk Factors for Osteoporosis



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Prevention

- Balanced diet high in calcium and vitamin D throughout life
- Use of calcium supplements to ensure adequate calcium intake: take in divided doses with vitamin C
- Regular weight-bearing exercises: 20 to 30 minutes a day
  - Increases balance
  - Reduces incidence of falls and fractures
- Weight training stimulates bone mineral density (BMD)

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PHARMACOLOGICAL THERAPY FOR OSTEOPOROSIS

- Calcium and vitamin D
- Bisphosphonates
  - Alendronate (Fosamax)
  - Risedronate (Actonel)
  - Ibandronate (Boniva)
  - Zoledronic acid (Reclast)
- Cacitonin
- Estrogen agonists/antagonists
- Parathyroid hormone
- Receptor activator of nuclear factor kappa-B ligand inhibitors

Nursing Process: The Care of the Patient With Osteoporosis—Interventions

- Promoting understanding of osteoporosis and the treatment regimen; education
- Relieving pain
  - Short periods of rest
  - Supportive mattress
  - Intermittent local heat and back rubs
- Improving bowel elimination
  - High fiber diet, increase fluids, stool softners
- Preventing injury
  - Physical activity to strengthen muscles, improve balance, and prevent disuse atrophy

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Osteomalacia

- A metabolic bone disease characterized by inadequate bone mineralization
- Softening and weakening of the long bones causes pain, tenderness, and deformities caused by the bowing of bones and pathologic fractures
- Deficiency of activated vitamin D causes lack of bone mineralization and low extracellular calcium and phosphate
- Causes include gastrointestinal disorders, severe renal insufficiency, hyperparathyroidism, and dietary deficiency

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Treatment of Osteomalacia

- Physical, psychological, and pharmaceutical measures to reduce discomfort and pain
- Correct underlying cause
- Kidney disease: supplement calcitriol
- Malabsorption: Increased doses of vitamin D and calcium are usually recommended
- Exposure to sunlight may be recommended; ultraviolet radiation transforms a cholesterol substance (7-dehydrocholesterol) present in the skin into vitamin D

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Paget Disease

- Disorder of localized bone turnover: skull, femur, tibia, pelvic bones, and vertebrae
- Incidence: 2% to 3% of the population older than age 50 years
- More common in men, and risk increases with aging; familial predisposition has been noted
- Pathophysiology: excessive bone resorption by osteoclasts is followed by increased osteoblastic activity; bone structure disorganized, weak, and highly vascular
- Cause is unknown

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Paget Disease

- Manifestations include skeletal deformities, mild to moderate aching pain, and tenderness and warmth over bones
- Symptoms may be insidious and may be attributed to old age or arthritis; most patients do not have symptoms
- Pharmacologic management
  - Antineoplastic therapy
  - NSAIDs
  - Calcitonin
  - Bisphosphonates (etidronate—Didronel)
  - Plicamycin (Mithracin): a cytotoxic antibiotic may be used for severe disease resistant to other therapy

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OSTEOMYELITIS

- Etiologies
- Classifications
  - Hematogenous
  - Contiguous-focus
  - Vascular insufficiency
- S/S
- Dx
- Prevention
- Treatment/ management
  - Supportive care
  - Pharmacological
  - Antibiotics
  - Surgical
  - Nursing care

Septic (Infectious) Arthritis

- High risk: older adults >80, and those with comorbid conditions such as diabetes, RA, skin infections
- Most commonly single knee and hip joints
- Presents with a warm, painful, swollen joint with decreased range of motion. Systemic chills, fever, and leukocytosis are sometimes present
- Prompt recognition and treatment are key
- Treatment includes aspiration of joint to remove fluid, exudate and debris; immobilization of joint; pain relief; and antibiotics

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BONE TUMORS

- Primary
  - Benign
  - Malignant
- Metastatic
- S/S
- Dx
- Management
  - Surgery, radiation, chemotherapy
  - Nursing care