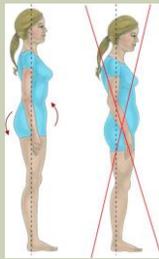


Musculoskeletal Disorders

R. Thomas

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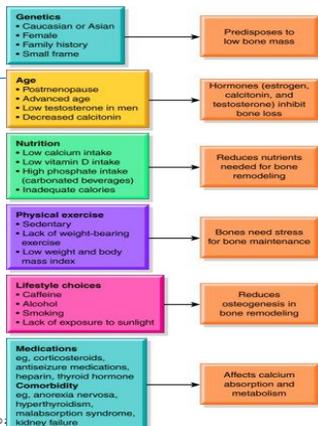
Nursing Process: The Care of the Patient Undergoing Foot Surgery— Interventions #2

- ❖ 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)
- Calcitonin
- 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 softeners
- ❖ 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
