

Narcotic/Non-narcotics
NAPNES Guidelines

Presented by
Laura Zdancewicz MSN, CRNP

Nonnarcotic Analgesics

- Relieve pain
- No physical dependency
- Types
 - Salicylates
 - Nonsalicylates
 - Nonsteroidal anti-inflammatory drugs (NSAIDs)

Nonnarcotic Analgesics

Salicylates

- Include aspirin (acetylsalicylic acid – ASA) and related drugs
- Actions - unknown
 - Analgesia
 - Inhibition of prostaglandins
 - Antipyretic
 - Reduces elevated body temperature
 - Anti-inflammatory effects
 - Inhibits platelet aggregation

Nonnarcotic Analgesics

Salicylates

- Uses
 - Relief of mild/moderate pain
 - Reduction of body temp
 - Treatment of inflammatory diseases
 - OA, RA
 - Reduction of MI risk in pts w/unstable angina
 - Reduction of CVA risk in men w/hx of TIAs
 - Not found effective in women

Nonnarcotic Analgesics

Salicylates

- Adverse effects
 - GI upset, heartburn, n/v, anorexia
 - GI bleeding
 - Allergic reaction – rare
 - **Salicylism** – salicylate toxicity
 - **Dizziness, tinnitus, impaired hearing**
 - Mild, usually with chronic dosing
 - **Mental confusion, respiratory depression, coma (large doses)**
 - **Reversible with dosage reduction**

Nonnarcotic Analgesics

Salicylates

- Salicylism
 - Other s/s – n/v, flushing, rapid deep breathing, tachycardia, diarrhea, drowsiness.
 - Adults: tinnitus and hearing loss
 - Children: hyperventilation and CNS effects
 - Effects arise when serum levels exceed 300µg/mL.
 - Metabolic acidosis and respiratory alkalosis may be present.

Nonnarcotic Analgesics

Salicylates

- **Contraindications**
 - Pregnancy – category D – may cause adverse fetal effects
 - Children or teenagers with the flu or chickenpox
 - Associated with **Reye's syndrome**
 - Life-threatening condition characterized by vomiting and lethargy, progressing to coma

Nonnarcotic Analgesics

Nonsalicylates

- **Examples**
 - Acetaminophen (**Tylenol, Datril**)
- **Actions**
 - Unknown exactly
- **Uses**
 - Analgesia
 - Antipyretic
 - **NO ANTI-INFLAMMATORY ACTION!**

Nonnarcotic Analgesics

Nonsalicylates

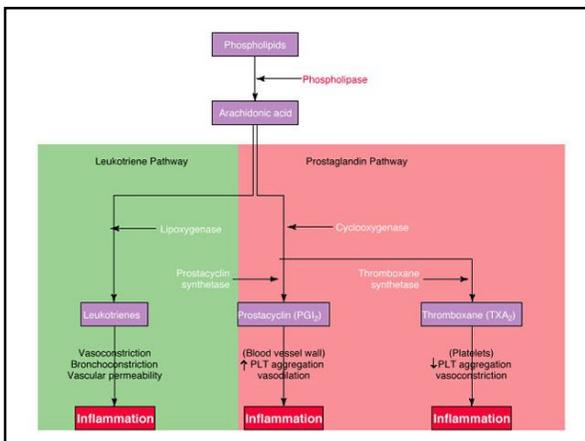
- **Adverse effects**
 - Few when used as directed
 - Skin eruptions
 - Urticaria
 - Pancytopenia
 - Hepatotoxicity, jaundice, hepatic failure
 - Esp. seen in chronic alcoholics
 - Acute acetaminophen poisoning

Nonnarcotic Analgesics Nonsalicylates

- Acute acetaminophen poisoning
 - Can occur after a single 10 -15 g dose of Tylenol
 - Dosages of 20 -25 g may be fatal
 - Liver cells necrose and die
 - Death is due to liver failure - risk is higher with alcoholic
 - s/s
 - n/v, confusion, liver tenderness, hypotension, arrhythmias, jaundice, acute hepatic and renal failure
 - Antidote
 - Acetylcysteine (Acetadote)

Nonnarcotic Analgesics NSAIDS

- Examples
 - Ibuprofen (**Motrin, Advil**)
 - Naproxen (**Naprosyn**)
 - Celecoxib (**Celebrex**)
 - Refecoxib (**Vioxx**) – removed from market in 2005
- Actions
 - Exact mechanism unknown



Nonnarcotic Analgesics
NSAIDS

- **Actions (cont.)**
 - Inhibition
 - Cyclooxygenase-1 (COX-1)
 - Enzyme assists in maintaining stomach lining
 - Cyclooxygenase-2 (COX-2)
 - Enzyme that triggers pain/inflammation
 - Celecoxib (**Celebrex**) & Refecoxib (**Vioxx**)
 - Inhibit COX 2 only
 - Less potential for GI adverse effects

Nonnarcotic Analgesics
NSAIDS

- **Uses**
 - Anti-inflammatory effects
 - Arthritic conditions/other musculoskeletal dxs
 - Analgesic effects
 - Mild/moderate pain relief
 - Primary dysmenorrhea
 - Antipyretic effects
 - Fever reduction

Nonnarcotic Analgesics
NSAIDS

- **Adverse effects – usually mild**
 - GI effects (less w/COX 2 inhibitors)
 - n/v, diarrhea, constipation, epigastric pain, indigestion, abd distress, intestinal ulceration, dry mouth
 - Cytotec (Misoprostol) – prostaglandin analogue
 - Given to protect against blockage of protective prostaglandin in the GI tract
 - CNS effects
 - Dizziness, anxiety, lightheadedness, vertigo, HA, drowsiness, insomnia, confusion, depression and psychic disturbances
 - Cardiovascular effects
 - Hypertension, CHF, cardiac arrhythmias, noncardiogenic pulmonary edema

Nonnarcotic Analgesics
NSAIDS

- Adverse Effects (cont.)
 - Renal effects
 - Hematuria, cystitis, elevated BUN, **acute renal failure in those w/impaired renal fx.**
 - reductions in creatinine clearance
 - acute tubular necrosis with renal failure
 - Special senses effects
 - Visual disturbances, photophobia, reversible loss of color vision, tinnitus, taste change

Nonnarcotic Analgesics
NSAIDS

- Adverse Effects (cont)
 - Hematologic effects
 - Prolonged bleeding, ecchymosis, petichae
 - Skin effects
 - Rash, erythema, Stevens-Johnson, purpura
 - Metabolic/endocrinologic effects
 - Decreased appetite, weight increase or loss, hypo & hyperglycemia, menstrual disorders
 - Others
 - Thirst, fever, chills and vaginitis

Nonnarcotic Analgesics
NSAIDS: Nursing Implications

- Assess allergies & history
 - Sulfa allergies
 - Hx of GI bleed, impaired renal/liver fx
- Pain assessment
 - Initial & ongoing
- Give with food, milk or antacids
- Monitor for adverse effects
- Pt education

Nonnarcotic Analgesics

NSAIDS: Nursing Implications

- Before beginning therapy, assess for conditions that may be contraindications to therapy, especially:
 - GI lesions or peptic ulcer disease
 - Bleeding disorders
- Assess also for conditions that require cautious use.
- Perform lab studies as indicated (cardiac, renal, liver studies, CBC, platelet count).

Nonnarcotic Analgesics

NSAIDS: Nursing Implications

- Perform a medication history to assess for potential drug interactions
- Several serious drug interactions exist:
 - alcohol
 - heparin
 - phenytoin
 - oral anticoagulants
 - steroids
 - sulfonamides

Nonnarcotic Analgesics

NSAIDS: Nursing Implications

- Salicylates are NOT to be given to children under age 12 because of the risk of Reye's syndrome.
- Because these agents generally cause GI distress, they are often better tolerated if taken with food, milk or an antacid to avoid GI irritation.
- Explain to patients that therapeutic effects may not be seen for 3 to 4 weeks.

Nonnarcotic Analgesics

NSAIDs: Nursing Implications

- Educate patients about the various side effects of NSAIDs, and to notify their physician if these effects become severe or if bleeding or GI pain occur.
- Patients should watch closely for the occurrence of any unusual bleeding, such as in the stool.
- Enteric-coated tablets should not be crushed or chewed.

Nonnarcotic Analgesics

NSAIDs: Nursing Implications

- Monitor for therapeutic effects, which vary according to the condition being treated:

Decrease in swelling, pain, stiffness,
and tenderness of a joint or muscle area

Other Non-Narcotic Drugs

NAPNES Guidelines

Laura Zdancewicz MSN, CRNP

Other Non-Narcotic Drugs

- Diseases commonly treated
 - Osteoarthritis (OA)
 - Rheumatoid arthritis (RA)
 - Gout
 - Osteoporosis
 - Paget's disease (osteitis deformans)
 - Synovitis

Other Non-Narcotic Drugs

Gold compounds

- Suppresses or prevents arthritis & synovitis
- Does not cure
- May take up to 8 months for full effects
 - Usually ~ 6 – 8 weeks
- Examples
 - Auranofin (**Ridaura**)
 - Aurothioglucose (**Solganal**)

Other Non-Narcotic Drugs

Gold compounds

- Actions
 - Unknown
 - Decrease synovial inflammation/retard cartilage and bone destruction
 - Decreases the concentration of rheumatoid factor and immunoglobulins

Other Non-Narcotic Drugs

Gold compounds

- Uses
 - Active juvenile & adult rheumatoid arthritis
 - Not controlled by other anti-inflammatory drugs
- Adverse effects
 - Dermatitis
 - Stomatitis
 - Pruritus
 - Photosensitivity reactions
 - Chrysiasis

Other Non-Narcotic Drugs

Gold compounds

- Nursing Implications
 - Contact HCP if metal taste
 - Arthralgia can last 1-2 days
 - Parenteral form
 - Avoid ultraviolet light
 - IM injections
 - Given preferably in large muscle (gluteus)

Other Non-Narcotic Drugs

Gout

- Examples & Actions
 - Allopurinol (**Zyloprim**)
 - Reduces serum acid production
 - Colchicine (*generic*)
 - Unknown – reduces inflammation assoc w/urate crystals in joints
 - Usually given in acute attack due to toxicity
 - Probenecid (**Benemid**)
 - Increased uric acid secretion by kidneys
 - Sulfapyrazone (*generic*)
 - Increased uric acid secretion by kidneys

Other Non-Narcotic Drugs

Gout

- Uses
 - prevent acute gouty attacks
 - Manage acute attacks
- Adverse effects
 - Skin rash
 - Stevens-Johnson syndrome
 - GI – n/v, diarrhea, abd pain, hematologic Δs

Other Non-Narcotic Drugs

Gout

- Nursing Implications
 - Give w/meals
 - Colchicine may be given q 1-2 hrs until pain relieved of GI adverse effects
 - Drink at least 10 glasses H₂O
 - Monitor adverse effects
 - Rash
 - Hypersensitivity rx
 - Hematologic effects – bleeding, bruising, weakness

Other Non-Narcotic Drugs

Gout

- Colchicine (cont.)
 - Dose
 - Initially 0.5 – 1.3mg
 - Followed by 0.5 to 0.65mg q 1-2h or
 - Until pain relieved
 - Until nausea, vomiting or diarrhea ensues
 - Not to exceed 4mg
 - » MORE CAN BE FATAL!!

Other Non-Narcotic Drugs
Gout
Colchicine (cont.)
MONITOR FOR GI EFFECTS!!

- Weakness
- Anorexia
- Nausea, vomiting
- May be first sign of overdose or toxicity
 - CAN BE FATAL
- Discontinue immediately and notify HCP

Other Non-Narcotic Drugs
Skeletal Muscle Relaxants

- Various Uses
 - Spasticity
 - Multiple sclerosis, spinal cord injuries etc.
 - Acute , painful musculoskeletal dxs
 - Muscle strains
 - Back pain

Other Non-Narcotic Drugs
Skeletal Muscle Relaxants

Examples

- Anti-spasticity
 - Baclofen (Lioresal)
 - Tizanidine (Zanaflex)
- Musculoskeletal problems
 - Carisoprodol (**Soma, generic**)
 - Cyclobenzaprine (**Flexeril**)
 - **Metaxalone (Skelaxin)**
 - Not as many CNS effects
 - **Chorazoxazone (Parafon Forte)**
 - Diazepam (**Valium, generic**)

Other Non-Narcotic Drugs
Skeletal Muscle Relaxants

- Adverse effects
 - Drowsiness – most common
 - Lethargy
 - Constipation/diarrhea
 - Tachycardia/bradycardia, hypotension
 - Rash

Other Non-Narcotic Drugs
Skeletal Muscle Relaxants

- Nursing Implications
 - Give with food
 - Encourage other treatment measures
 - Rest
 - Physical therapy
 - Evaluate pts ability to ambulate
 - Especially with initiation of therapy
 - Risk of injury due to drowsiness/sedation

Other Non-Narcotic Drugs
Bisphosphonates

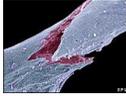
- Examples
 - Alendronate sodium (**Fosamax**)
 - Etidronate (**Didronel**)
 - Risedronate sodium (**Actonel**)
 - Pamidronate (**Aredia**) – IV
 - Zoledronic acid (**Zometa**) – IV
 - Ibandronate (**Boniva**) – IV
- Actions
 - Act on bone
 - Inhibits normal/abnormal bone resorption
 - Results in increased bone mineral density

Other Non-Narcotic Drugs

Bisphosphonates

- Uses

- Osteoporosis – prevention & treatment
 - Alendronate sodium (**Fosamax**)
 - Risedronate sodium (**Actonel**)
- Paget's disease & Post-op hip replacement
 - Etidronate (**Didronel**)



- Adverse effects

- Nausea, diarrhea
- Increased bone pain
- Dyspepsia, dysphagia, *esophagitis*
- Acid regurgitation/abdominal pain
- Osteonecrosis of the jaw (rare) – more common with IV administration

Other Non-Narcotic Drugs

Bisphosphonates

- Nursing Implications

- Given whole tablet orally
 - 30 minutes before food/drink
- Administer with 6-8 oz water
 - Upright position (do not lie down 30' afterwards)
 - Minimizes GI effects
 - Facilitate delivery to stomach
 - Prevents esophageal symptoms

Other Non-Narcotic Drugs

Drugs to treat osteoporosis

- Selective estrogen receptor modulators (SERMs)

- Prevention and treatment
- Other drug effects
 - Improves lipid panel
 - Does not promote endometrial/breast cancer
- Side effects
 - Hot flashes
 - Leg cramps
 - Breast tenderness
 - Vaginal bleeding

Other Non-Narcotic Drugs

Drugs to treat osteoporosis

- Hormone therapy
 - Estrogen in women
 - Testosterone in men
 - Osteoporosis 2nd to glucocorticoid use
- Due to increase risk of heart disease in women
 - Only used if all other therapies fail

Other Non-Narcotic Drugs

Drugs to treat osteoporosis

- Calcitonin
 - Marketed as Miacalcin
 - Nasal spray (most common) & injection
 - Indicated only for treatment 5 yrs post menopausal
 - May be used as prevention
 - Secondary to glucocorticoid use (not FDA approved)
 - Side effects
 - Local nasal irritation

Other Non-Narcotic Drugs

Drugs to treat osteoporosis

- Parathyroid hormone (PTH)
 - Teriparatide (Forteo)
 - Daily exposure to PTH stimulates bone formation
 - Human PTH
 - Made using a strain of *escherichia coli*
 - Given subcutaneous injection
 - Indicated for males & females
 - At high risk for fracture
 - Safety and efficacy not evaluated beyond 2 year

Other Non-Narcotic Drugs

Corticosteroids

- Hormones of adrenal cortex
- Synthetic forms available
- Potent anti-inflammatory effects
- Uses
 - Inflammatory musculoskeletal conditions
 - Rheumatic disorders
 - Arthritis
 - Bursitis

Other Non-Narcotic Drugs

Miscellaneous Drugs

- Examples
 - Penicillamine (**Cuprimine**)
 - Hydroxychloroquine sulfate (**Plaquenil**)
 - Methotrexate (**Rheumatrex**)
 - Auranofin (**Ridaura**) – gold
 - Azathioprine (**Imuran**)
 - Leflunomide (**Arava**)
 - Minocycline (**Minocin**)
 - Sulfasalazine (**Azulfidine**)
- Actions
 - unknown

Other Non-Narcotic Drugs

Miscellaneous Drugs

- Uses
 - Rheumatoid arthritis
- Adverse effects
 - Penicillamine (**Cuprimine**)
 - Pruritis, rash
 - Anorexia, n/v, alteration in taste perception
 - Bone marrow depression
 - Tinnitus
 - Delayed wound healing
 - Other severe reactions

Other Non-Narcotic Drugs

Miscellaneous Drugs

- Adverse effects (cont.)
 - Hydroxychloroquine sulfate (**Plaquenil**)
 - Irritability, nervousness
 - Anorexia, n/v, diarrhea
 - Blurred vision, corneal edema, halos around lights, retinal damage
 - Hematologic effects
 - Methotrexate (**Rheumatrex**)
 - **Potentially toxic drug**
 - n/v, diarrhea
 - Leukopenia, thrombocytopenia
 - Stomatitis
 - Rash, pruritis, dermatitis, alopecia

Other Non-Narcotic Drugs

Miscellaneous Drugs

- Nursing Implications
 - Penicillamine (**Cuprimine**)
 - Give on empty stomach
 - Give one hour apart from other drugs
 - Taste perception usually returns 2-3 months
 - Methotrexate (**Rheumatrex**)
 - Take exactly as prescribed – given weekly
 - Mistaken daily use = fatal toxicity
 - Use contraception if childbearing years
 - Continue for 8 weeks after therapy

Other Non-Narcotic Drugs

Miscellaneous Drugs

- Nursing Implications (cont.)
 - Hydroxychloroquine sulfate (**Plaquenil**)
 - Give w/food/milk
 - Notify HCP
 - Hearing/visual changes
 - Hair loss or color change
 - Changes in skin, severe rash
 - Easy bruising or bleeding
 - Mood changes

Narcotic Analgesics

Narcotic Analgesics

- Controlled substances
- Treats moderate to severe pain
- Classifications
 - Agonist
 - Partial agonist
 - Mixed agonist-antagonist

Narcotic Analgesics

- Examples of Agonists
 - Codeine (*generic*)
 - Fentanyl (**Sublimase, Duragesic**)
 - Hydromorphone (**Dilaudid**)
 - Meperidine (**Demerol**)
 - Morphine sulfate (**MS Contin, Roxanol**)
 - Oxycodone (**OxyContin**)
 - Propoxyphene (**Darvon**)

Narcotic Analgesics

- Examples of Partial Agonists
 - Butorphanol (**Stadol**)
- Examples of agonist-antagonists
 - Nalbuphine (**Nubain**)
 - Pentazocine (**Talwin**)

Narcotic Analgesics

- Action
 - Inhibit impulses by raising neuron threshold
 - Cause a mood change
 - Euphoria
 - Detachment
 - Soporific
 - Cause sleep

Narcotic Analgesics

- Uses
 - Moderate to severe pain
 - Manage anxiety
 - Preoperatively
 - Myocardial infarction
 - Sedation
 - Anesthesia support
 - Intrathecally/epiderally for extended pain relief
 - Management of opiate dependence (Methadone)
 - Treatment of severe diarrhea/intestinal cramping
 - Severe cough

Narcotic Analgesics

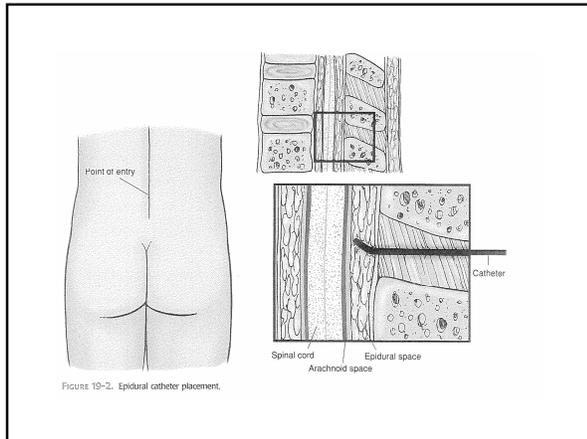
- Adverse effects
 - Respiratory depression
 - Light-headedness, dizziness, sedation
 - Constipation, anorexia, n/v
 - Sweating
 - CNS effects
 - Euphoria
 - Mental impairment
 - Physical dependence

Narcotic Analgesics

- Nursing Implications
 - Pain assessment
 - Not to be given in pts w/head injury or increased intracranial pressure
 - Assess respiratory status before administration
 - Patient controlled analgesia (PCA)
 - Next slide



FIGURE 19-1. Patient-controlled analgesia allows the client to self-administer medication, as necessary, to control pain.



Narcotic Analgesics

- Chronic pain
 - Morphine sulfate (MSO4)
 - OxyContin
 - Fentanyl transdermal system

Narcotic Antagonists

- Antagonist
 - Substance that counteracts action of something else
- Narcotic antagonist
 - Reverses the actions of a narcotic
 - Developed to reverse respiratory depression associated w/opiates

Narcotic Antagonists

- Examples
 - Naloxone (**Narcan**)
 - Naltrexone (**ReVia, Depade**)
- Actions
 - Not fully understood
 - Competes for opiate receptor sites
- Uses
 - Complete or partial reversal of narcotic depression
 - Including respiratory depression

Opiates

- Opioid Tolerance
 - A common physiologic result of chronic opioid treatment
 - Result:
 - larger dose of opioids are required to maintain the same level of analgesia
- Physical Dependence
 - The physiologic adaptation of the body to the presence of an opioid

Opiates

- Physical dependence on opioids is seen when the opioid is abruptly discontinued or when an opioid antagonist is administered.
 - Narcotic withdrawal
 - Opioid abstinence syndrome

Opiates

- Narcotic Withdrawal Opioid Abstinence Syndrome
 - Manifested as:
 - anxiety, irritability
 - chills and hot flashes
 - joint pain, lacrimation, rhinorrhea, diaphoresis,
 - nausea, vomiting, abdominal cramps, diarrhea

Opiates

- Psychological Dependence (aka addiction)
 - A pattern of compulsive drug use
 - characterized by
 - a continued craving for an opioid
 - the need to use the opioid for effects other than pain relief

Opiates

- Opioid tolerance and physical dependence are expected with long-term opioid treatment and should not be confused with psychological dependence (addiction)
- Misunderstanding of these terms leads to ineffective pain management and contributes to the problem of undertreatment.

Opioid Analgesics

Nursing Implications

- Before beginning therapy, perform a thorough history regarding allergies, use of other medications, health history, and medical history.
- Obtain baseline vital signs and I & O.
- Assess for potential contraindications and drug interactions.

Opioid Analgesics

Nursing Implications

- Perform a thorough pain assessment, including nature and type of pain, precipitating and relieving factors, remedies, and other pain treatments.
 - Assessment of pain is now being considered a “fifth vital sign.”

Opioid Analgesics

Nursing Implications

- Be sure to medicate patients before the pain becomes severe as to provide adequate analgesia and pain control.
- Pain management includes pharmacologic and nonpharmacologic approaches. Be sure to include other interventions as indicated.

**Opioid Analgesics
Nursing Implications**

- Oral forms should be taken with food to minimize gastric upset.
- Ensure safety measures, such as keeping side rails up, to prevent injury.
- Withhold dose and contact physician if there is a decline in the patient's condition or if VS are abnormal—especially if respiratory rate is below 12 breaths/minute.

**Opioid Analgesics
Nursing Implications**

- Follow proper administration guidelines for IM injections, including site rotation.
- Follow proper guidelines for IV administration, including dilution, rate of administration, and so forth.

CHECK DOSAGES CAREFULLY

**Opioid Analgesics
Nursing Implications**

- Constipation is a common side effect and may be prevented with adequate fluid and fiber intake.
- Instruct patients to follow directions for administration carefully, and to keep a record of their pain experience and response to treatments.
- Patients should be instructed to change positions slowly to prevent possible orthostatic hypotension.

**Opioid Analgesics
Nursing Implications**

- Patients should not take other medications or OTC preparations without checking with their physician.
- Instruct patients to notify physician for signs of allergic reaction or adverse effects.

**Opioid Analgesics
Nursing Implications**

Monitor for side effects:

- Should VS change, patient's condition decline, or pain continue, contact physician immediately.
- Respiratory depression may be manifested by respiratory rate of less than 12/min, dyspnea, diminished breath sounds, or shallow breathing.

**Opioid Analgesics
Nursing Implications**

Monitor for therapeutic effects:

- Decreased complaints of pain
- Increased periods of comfort
- With improved activities of daily living, appetite, and sense of well-being

Narcotic Analgesics

Nursing Process

- Assessment of need
 - Possible use of placebo
 - Psychological addiction to narcotic
 - Possible use of non-narcotic
 - Other nursing measures
- Implementation
 - Familiarity with various drugs, route, average doses (Liley, pg 155 & pg 735)

Narcotic Analgesics

Nursing Process

- Cultural implications
 - Each culture has unique beliefs, attitudes and treatment of pain
 - African-Americans
 - Believe in healers
 - Prayer and laying down on of hands
 - Hispanic-Americans
 - Prayer, wearing amulets
 - Use of herbs and spices
 - Chinese
 - Acupuncture, herbal remedies
 - Yin and yang, cold treatment
 - Native Americans
 - Massage, heat application, sweat baths
 - Herbal remedies, being in harmony with nature

Narcotic Analgesics

Nursing Process

- Teaching tips
 - Refer to Liley, Pg 166
- Observe for/minimize side effects
 - Contraindications
 - Interaction with other drugs
- Evaluating effectiveness of drug
 - Recognizing therapeutic signs
 - Reporting/recording
