Discipline of Nursing  M 5015

- Rest and Sleep
- Comfort
- Nutrition

Rest and Sleep

- Sleep: a state of rest, accompanied by altered consciousness and relative inactivity.
- Rest: a condition in which the body is in a decreased state of activity with the consequent feeling of feeling refreshed.

Circadian Rhythm

- Rhythmic biological clock
  - Influenced by internal and external factors
  - Individual biological clocks
- Need to be in sync: activities and ones biological clock.
  - Patient: noisy environment of hospital
  - Nurse: shift work
  - Lay public: jet lag
Sleep and Rest: Developmental Considerations

- Differences by age:
  - Infants: 16 hrs.
  - Children: 12 hrs.
  - Adolescents: varies; probably should have 8 hrs.
  - Adult: 6-8 hrs.
  - Elderly: 5-7 hrs.
  - Old-old: 8-12 hrs.

Factors that affect sleep requirements

- Age
- Activity/exercise
- Illness
- Medications
- Diet
- Alcohol
- Environmental considerations

Sleep Disorders

- Insomnia: difficulty falling asleep
  - Stress
  - Medication
  - Hormonal changes
  - Illness: hyperthyroidism, psych: manic
  - Recreational drugs

- Narcolepsy: difficulty staying awake (CNS derangement)
Sleep Apnea
- Periods of apnea during sleep
  - Common: middle aged men who are obese and have short, thick necks
  - Obstructive apnea: large tonsils or adenoids, collapse of hypopharynx
  - Dx. by polysomnography: EEG, O₂ Saturation and EKG
  - Tx.: identify and tx. the cause

Sleep Deprivation
- Increasing sx. After 30 hrs of continuous awake period.
  - Decreased ability to concentrate
  - Irritability
  - Depressed reflex / reaction time
  - Impaired judgment

Promoting Sleep
- Restful environment
- Bedtime rituals
- Snacks/beverages
- Avoid caffeine
- Promote comfort / address pain
- Respect normal patterns
- Schedule nursing care to work within normal patterns for patient.
- Medications
Nursing Diagnosis

ドルーン pattern disturbance (insomnia) r/t ICU environment

Breathing pattern impairment r/t sleep apnea

Comfort

Pain: “is whatever the experiencing person says it is, existing whenever he (or she) says it does” McCaffery (1979).

Categories of pain:

- Nociceptive: acute, result of noxious stimuli
- Cutaneous: skin or subcutaneous tissue
- Somatic pain: deep, diffuse, originates from blood vessels, tendons, ligaments or bones
- Visceral pain: poorly localized, originates in organs in cranium, thorax or abdomen.
- Neuropathic pain: pain from insult to nerves or CNS.
- Allodynia: neuropathic pain after slight stimulation

Referred pain

Pain perceived in an area that is distant from the source. e.g.:

- AMI: jaw, left arm
- Renal Colic (kidney stone): groin
Structural Pain Patterns of Organs

- **Bowel**: cramping, sharp, with 2-3 minute repeat cycles
- **Solid organs**: (liver, kidney, ovary): sharp, steady without relation to body function
- **Hollow organs**: (uterus, bladder, gallbladder) sharp, cramping, related to body function
- **Arteries**: severe, steady, with sharp accentuations
- **Blood in abdominal cavity**: dull awareness, then sharp, steady
- **Myocardium**: all referred, dull, heavy ache, weight, tight band.

Pain Patterns of Specific Problems

- **Appendicitis**: starts with dull peri-umbilical, develops to sharp RLQ. Rebound tenderness at McBurnies point.
- **AMI**: heavy, dull, vice like, epi-gastrum, or sternum to left arm or sternum opt jaw.
- **Lower lobe pneumonia**: steady, sharp pain which increases with inspiration.
- **Acute cholecystitis**: starts with diffuse epigastric pain, develops to sharp RUQ pain. Referred pain to right scapular area: Kehr's sign.
- **Dissecting Aortic Aneurysm**: back pain, sharp lower back pain with testicular pain.
- **Ruptured Ectopic pregnancy**: sudden sharp, steady pain in LQ, referred pain to scapular and base of neck.

Responses to Pain

- **Behavioral**:
  - move away form
  - Grimacing, moaning, crying
  - Guarding
- **Physiologic**:
  - Inc. b/p, pulse, RR
  - Pupil dilation
  - Muscle tension
  - Pallor
  - Inc. adrenalin output
  - Inc. blood glucose
Assessment of pain

- Location and ..
- P provoking factors
- Q quality
- R radiation
- S severity (scale 1-10)
- T time/duration

Barriers to pain assessment

- Developmental: age: young child use pictures, smiley faces, or infant, use your judgment: look for facial grimacing
- Language: get an interpreter
- Non-literate: use color scale

Evaluation

- After intervention for pain MUST evaluate effectiveness
  - Always get a baseline of pain level before intervention
  - Perform the intervention
  - Depending upon the intervention and expected time for action, re-evaluate.
  - Check periodically, as most interventions will have to be repeated.

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Non-pharmacological Relief Measures for Pain

- Heat/cold therapy
- Distraction/diversion
  - Music, humor
- Imagery
- Relaxation
- Cutaneous stimulation (TENS, massage)
- Acupuncture
- Hypnosis
- Biofeedback
- Therapeutic Touch

Pharmacological Therapy

- Non-controlled ie: NSAIDS
- Controlled: narcotics and opioids
- Adjuvant: multipurpose

Use the smallest amount, of the least powerful that will control the pain. Usually use high to break the pain cycle, and then can reduce.

Narcotics and Opiates

- Extremely powerful.
- Most common side effect: respiratory depression. Usually preceded by sedation: use sedation scale to assess:
  - 1 = awake, alert
  - 2 = occasionally drowsy
  - 3 = frequently drowsy
  - 4 = somnolent, lethargic. (d/c narcotic/opiate)
Acute Pain

- Must get control of the pain to break the pain cycle
  - Give dose ATC
  - Adjust to receive maximum benefit with minimum SE
  - Allow patients control
  - Medicate until pain control is achieved

Pain control variations by age

- Younger patients: Just because you are young does not mean that you do not feel pain.
- Older patients: Little research r/t pain control in the elderly. With decreased liver function, may need lower doses to achieve same effect.

Modes of pain control

- Self medication
- Patient controlled analgesia
- Administered medication:
  - PO, SQ, IM, IV, epidural
  - Local medication: local infiltration, nerve block, ointment
Nursing Diagnosis
- Acute pain (rt. Flank) r/t renal colic
- Chest pain r/t AMI
- Chronic pain (bilateral joints of hands) r/t rheumatoid arthritis.
- Impaired mobility r/t hip joint pain of chronic arthritis

Nutrition
- **Nutrients**: specific biochemical substances used by the body for growth, development, activity, health maintenance and recovery from illness/injury.
- **Calories**: energy obtained from nutrients in the diet.
- **Basal metabolism**: the amount of energy required to carry on the involuntary activities of the body at rest.
- **Ideal Weight**: rule of thumb:
  - Female: 100 lbs + 5 lbs for each inch over 5 feet.
  - Male: 106 lbs + 6 lbs for each inch over 5 feet.
  - Can = or – 10 % based upon body frame size.

Body Mass index (BMI)
- Kg / ht^2 (in meters) or
- Lbs / ht^2 (in inches) X 704.5
  (see BMI chart)
- BMI > 25 overweight
- BMI > 30 obese
**Required Nutrients**

- Carbohydrates
- Fats
- Proteins
- Vitamins
- Minerals
- Water

**Healthy Diet**

- Moderation
- Variety
- Balanced
  
  (see food pyramid)

- Males: 2400 cal daily
- Females: 2100 cal daily

**Factors which Influence Nutrient Requirements/Intake**

- Age: infants to older adult
- Pregnancy
- Activity
- Illness
- Alcohol abuse
- Medication
- Economics
- Psychosocial factors
- Cultural
Anthropometrics

- Measurements to determine body dimensions
- Height
- Weight
- Triceps skin fold
- Mid arm circumference

Enteral Nutrition

- Provided through passing a feeding tube: can be naso gastric, or PEG (percutaneous endoscopic gastrostomy tube).
- Must always confirm placement of the tube: instill air, and listen for gurgling sounds.
- Uncomfortable
- Use only as necessary
- Risks associated with

Naso gastric Tube

- Check placement before each feeding
- Potential for aspiration
- Patient misses the taste of food
- Check residual
- If patient is sick enough for tube feedings, must weigh the patient to track weight.
- Change the formula at least Q 4 hrs, so it does not go bad.
**Total Parenteral Nutrition**

- Meets nutritional requirements directly via IV methods. Bypasses the GI tract.
- Highly effective, but HIGH RISK.
- These patients are susceptible to local and systemic infections, hyperglycemia.
- Used when serum albumin levels > 2.6 g/dl.

**When to medicate for pain?**

- As long as pain medication will not mask symptoms and interfere with diagnosis, treat the pain.
- Use the proper medication: drug, dose, timing, route

**Nursing diagnosis**

- Altered nutrition (less than required caloric intake) r/t bulimia
- Risk for aspiration r/t NG tube
- Altered nutrition state (obesity) r/t high fat, high caloric diet
- Potential for infection (line sepsis) r/t TPN infusion.