

Bullet Point Nursing

Nursing fundamentals – Nutrition

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A & P Review:

- Everyone must have a sufficient intake of amino acids, vitamins, minerals, lipids, proteins, carbs
- Organs involved in nutrition include the oropharynx, esophagus, stomach, pancreas, liver, gallbladder, small and large intestines, and colon

Dietary components

- Protein
 - Necessary for tissue synthesis, metabolism, acid-base balance, immune system, and more
 - Mostly from animal products such as meats and dairy
 - Albumin is the most abundant protein in the body and is synthesized in the liver
 - Normal albumin level is 3.5 – 5.5 g/dL
 - Elevated albumin can mean dehydration (albumin is concentrated in excess fluid)
 - Low albumin can be from fluid overload or poor nutritional status such as malnutrition and malabsorption, can also be from liver problems
- Fiber
 - Is indigestible in humans
 - Helps with digestion, satiety (feeling full), and glucose control
- Carbohydrates
 - Used for energy
 - Includes grains and sugars
- Lipid (Fat)
 - Saturated fats come from meats, egg yolk, dairy, and more
 - Unsaturated fats are considered healthier versus saturated fats
 - Used for energy, satiety, cholesterol synthesis, and more
 - Excess contributes to cholesterol
- Vitamins
 - Are discussed in detail in the nutrition lecture in pharmacology
- Minerals
 - Includes: calcium, magnesium, phosphorous, potassium, and sodium
 - Trace minerals include: iodine, iron, zinc, fluoride, and many more
- Water
 - Must be included in nutrition education
 - Too little can cause dehydration and related complications
 - Patient with heart failure need to be cautioned regarding excess fluid intake

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Nutritional concepts

- Basal metabolic rate
 - The energy the body uses for normal functioning
 - Faster BMR results in higher temperature and weight loss
 - Slower BMR is the opposite
- Glycemic index
 - A system to categorize food based on how quickly they increase your blood glucose
- MyPlate.gov
 - USDA guide to nutrition
 - Consists of five food groups: fruits, grains, vegetables, protein, and dairy
 - Provides dietary information for many specific populations such as pregnant and infants
- Food desert
 - An area that has limited access to fresh healthy food vs fast food and convenience stores
 - Defined as being over a mile from a supermarket in an urban setting or 10 miles in a rural setting
- Registered dietitian (RD)
 - Licensed professional that works on improving health through nutrition
- Body mass index (BMI)
 - A popular formula for determining body fat based on height and weight
 - Under 18.5 is underweight
 - 18.5-24.9 is healthy
 - Over 25 is overweight
 - Over 30 is obese

Diets

- Regular
 - No specific nutritional requirements or restrictions
- Renal
 - Fluid and electrolyte management for patients with kidney problems
- Diabetic
 - Controls calories and carbs to manage diabetes
- DASH diet (Cardiac)
 - Geared towards lowering unhealthy foods for improved heart health
- Mechanical soft
 - Used for those with trouble chewing
- Liquid
 - Can be full liquid (soup, shakes, yogurt) or clear liquid (water, juice, popsicles)
- NPO
 - Used when a patient is unable to swallow, pre-operative, or other reasons

Feeding options

- Gastric tube (NG, OG, G, J, NJ)

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- Also known as enteral nutrition
- Full nutritional components given into the GI system
- Total parenteral nutrition (TPN)
 - Full nutritional components given via the IV route
 - Should ideally be given via a central line to prevent extravasation

Factors that impact nutrition

- Lifespan development
 - Growing stages have unique nutritional requirements
 - Infants require breast milk or commercial infant formulas
 - Infants should not receive cow's milk until one year of age
 - Pregnancy requires adequate intake of folic acid
 - Pregnancy and breastfeeding require extra caloric intake (approx. 300-500)
- Alcohol and / or drug abuse
 - Can cause many nutritional deficiencies such as thiamine and folic acid
- Medications
 - Can impact appetite, low down or speed up metabolism
- Vegetarian / vegan diet
 - May cause deficiencies in vitamins especially B12 that is only available from animals
 - Iron, vitamin D and other necessary nutrients may require supplements
- Illness
 - Vomiting and diarrhea can impact nutritional balances, especially fluids
 - GERD, chronic constipation, diabetes, and other diseases can impact nutrition
 - Burns and those with major wounds require increased protein intake
 - Eating disorders such as anorexia and bulimia
- Depression and stress
 - Can result in unhealthy increase or decrease of caloric intake

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References

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