

ATI Nutrition Proctored
Part 1: General Notes
Part 2: Focused Review Notes
Part 3: ATI Rational with Additional/Supported Information

PART 1: GENERAL NOTES (Important Facts)

- Be wary of questions regarding children drinking too much milk i.e. more than 3-4 cups of milk each day. Too much milk intake reduces intake of other essential nutrients, especially iron. Watch for anemia with milk-aholics.
- Vitamin D's presence is required by the parathyroid gland, in order for it to function.
- If the patient is taking digoxin or K-supplements, avoid salt substitutes because many are potassium based
- Potassium Sources: bananas, potatoes, citrus fruits
- No milk (as well as fresh fruit or veggies) on neutropenic precautions.
- Nondairy sources of calcium include RHUBARB, SARDINES, COLLARD GREENS 24
- Nonfat milk reduces reflux by increasing lower esophageal sphincter pressure
- Yogurt has live cultures, so do not give to immunosuppressed patients
- No phenylalanine with a kid positive for PKU (no meat, no dairy, no aspartame).
- Acid Ash diet: cheese, corn, cranberries, plums, prunes, meat, poultry, pastry, bread
- Alk Ash diet: milk, veggies, rhubarb, salmon

PART 2: Focused Review Notes

Manifestations of Vitamin A Toxicity

- Can cause teratogenic effects on fetuses
- Blurred vision
- Bone pain or swelling
- Hypercalcemia
- ICP
- Liver damage
- Skin peeling, itching
- Nausea and vomiting
- Abnormal softening of the skull bone (children) and bulging fontanel

Planning Care for a Client Who Follows Seventh-Day Adventist Dietary Laws

- Vegetarianism
 - Do not consume animal products of any type INCLUDING eggs and milk products.
 - Vitamin B12 and Vitamin D supplements may be needed with a pure vegan diet.
- Vegan diets are adequate in protein due to intake of nuts and legumes (dried peas and cooked beans).

Initiating Continuous Enteral Feeding

- This is recommended for critically ill patients because it is associated with small residual volumes, **and a lower risk of aspiration and diarrhea.**
- Residual volumes should be measured q4-6hrs.
- Feeding tubes should be flushed with water q4hr to maintain patency and hydration.
- If patient's gastric volume exceeds 500ml, the continuous feeding should be HELD and tolerance reassessed.
 - **In children**, residual volumes should be measured and held if the amount is equal to or greater than $\frac{1}{4}$ the prescribed feeding amount.
- Residual should be returned and the amount rechecked in 30min to 1hr.

Recommendations for Nutritional Supplement

- Add skim milk to powder milk (double strength milk)
- Use whole milk instead of water recipes
- Add cheese, peanut butter, chopped hard-boiled eggs, yogurt.
- Dip meats in eggs or milk and coat with bread crumbs before cooking.
- Nuts and dried beans are significant sources of protein □ great alternatives to dairy allergy or lactose intolerance!

Assessing Caloric Intake

- Toddlers: 1 to 3 years old
 - Limit 100% juice 4 to 6oz a day
 - The 1 to 2-year-old requires whole cow's milk to provide adequate fat.
 - Food serving size is 1 tablespoon for each year of age.
- Preschoolers: 3 to 6 years old
 - Preschoolers need 13 to 19 g/day of complete protein.
 - 1 tablespoon per year of age for size of foods.
 - May switch to skin or 1% low-fat milk after 2 years.
- School-Age Children: 6 to 12 years old
 - Weight loss program is directed for children 40% overweight.
- Adolescence
 - Energy requirements average 2,000 calorie/day for a 12 to 18-year-old female.
 - Energy requirements average 2,200 to 2,800 calorie/day for a 12 to 18-year-old male.
 - Average U.S. adolescent consumes a diet deficient in folate, vitamin A and E, iron, zinc, mag, calcium, and fiber.
- Adulthood and older adulthood
 - Need a balanced diet that consists of 40% to 55% carbs, and 10-20% fat (with no more than 30% fat).
 - A 24 hr dietary intake is helpful in determining the need for dietary education.
- Use whole grains, select orange and dark green leafy vegetables, avoid fruits with added sugar (make half your plate vegetables and fruits), use vegetable oils, 132-362 discretionary calories are permitted per day.

MEN CALORIE INTAKE

WOMEN CALORIE INTAKE

19 to 30 years old: 2,400 calories	19 to 30 years old: 2,000 calories
31 to 50 years old: 2,200 calories	31 to 50 years old: 1,800 calories
51+ years old: 2,000 calories	51+ years old: 1,600 calories

Teaching about High-Fiber Food Sources

- Beans
- Vegetables
- Oats
- Whole grains
- Cereals
- Nuts, seeds
- Raw or dried fruits
- Barley
- Flaxseed
- Avocado
- Chickpea
- Brown Rice
- Sweet Potato/Reg. Potato
- Quinoa

Priority Cholesterol Levels to Report

- HDL (good cholesterol) should have levels greater than or equal to 60mg/dl
- LDL (bad cholesterol) is less than 130mg/dl.
- Optimal cholesterol level is less than 200mg/dl.

Prioritizing Care for Intermittent Enteral Feeding

- Formula is administered q4-6hr in equal portions of 250 to 400 ml over a 30-60min time frame usually by gravity drop or pump.
- Residual volumes should be measured prior to initiating the feeding and held if the amount is greater than the amount stated in the prescription.
- Tube should be marked with ink or tape and checked to make sure it has not migrated.
- Assess bowel sounds. Dysfunction can indicate a need for alternate forms of nutrition.
- Elevate head of bed 30 degrees and for at least 30 to 60 minutes after.

Menu Choices for Preventing Aspiration

- Encourage small bites and thorough chewing.
- Pills should be taken with at least 8oz of fluid (can be thickened).
- Avoid thin liquids and sticky foods.

Interventions for Diarrhea Caused by Radiation Therapy

- Ensure adequate intake of liquids to replace losses.
- Avoid foods that exacerbate diarrhea (foods high in roughage)
- Consume foods high in pectin to increase bulk of the stool.
- Limit caffeine, hot or cold drinks, and fatty foods.

Evaluating Teaching about Complete Proteins

- Complete proteins are from animal sources and soy
- They contain sufficient amounts of all 9 amino acids.

Folate Intake During Pregnancy

- Helps prevent neural tube defects in utero (Folic acid is the synthetic form).
- Deficiency causes spina bifida, anencephaly.
- Take 400-800 mcg a day (According to the internet, does not say anywhere in ATI)

Food Choices for a Client Who Practices Orthodox Judaism

- Special food preparations (kosher kitchens) **NO MEAT AND MILK TOGETHER**
- Guidelines state that animal slaughter must be “humane” and do not waste meat.
- They avoid all pork and shellfish products.

Heme Sources of Iron

- Meat
- Fish
- Poultry

Appropriate Food Choices for a Toddler

- Prefer finger foods due to autonomy
- Prefer plain foods rather than mixture foods, but usually like macaroni, spaghetti, and pizza.

Teaching a Client Who Has Dumping Syndrome

- Recommend small, frequent meals.
- Recommend protein and fat at each meal.
- Avoid concentrated sugar and restrict lactose intake.
- Suggest that the client consume liquids 1 hour before or after eating instead of during meals (dry diet).
- Instruct patient to lie down for 20-30min after meals to delay gastric emptying. If reflux is an issue, suggest a recliner.
- Monitor for deficits in iron and vitamin B12.

Primary Function of Calcium

- Bones/teeth formation
- blood pressure
- blood clotting
- Nerve transmission

Complications of Childhood of Obesity

- Diabetes
- Hypertension

- Bone/joint problems
- Respiratory problems such as asthma
- Sleep apnea
- Earlier than normal puberty or menstruation
- Anorexia or bulimia
- Skin infections due to moisture from sweat trapped in skin folds
- Fatigue

Administering Parenteral Nutrition

- Preparation
 - **A micron filter is required!**
 - Evaluate allergies to soybeans, safflower, or eggs if lipids are prescribed.
- Ongoing Care
 - Assess I&O's, weight, vitals
 - Insulin may be prescribed due to hyperglycemia.
 - Hyperosmolar diuresis can result from rapid infusion.
 - You can avoid hypoglycemia by administering 20% water and 10% Dextrose.
 - **MONITOR FOR "CRACKING"** which occurs if calcium or phosphorus is too high. It has an oily appearance or a layer of fat on top of the solution. Don't use.
 - **Use aseptic technique.**
 - **Use sterile technique when changing central line dressing and tubing.**

Nutritional Interventions for Pancreatitis

- NPO and NG Tube is inserted.
- TPN can be used until oral intake is resumed.
- Low fat, high protein, and high carbohydrate diet is prescribed.
- Includes supplements of Vitamin C and B-complex vitamins.

Providing a Culturally Sensitive and Sodium-Restricted Meal

- African American
 - Encourage frying lightly with canola/olive oils
 - Encourage fruit and veggies and decrease meat.
 - Suggest dark green leafy vegetables and low-fat cheeses as calcium sources.
 - Associate "good health" with better food choices and portion control.
 - Suggest unhealthy food only on special occasions.
- Asian American
 - Encourage continued use of plant-based diet and food preparation as generations take on "American Foods"
 - Moderate salt intake
 - Limit sugar-laden foods.

Indications of Fluid Volume Deficit

- Tachycardia
- Weak, thready pulse

- Hypotension
- Orthostatic hypotension
- Tachypneic
- Hyperthermia
- Decrease central venous pressure

Providing Dietary Guidelines for Client with Cystic Fibrosis

- Well balanced diet that is high in protein
- 3 meals a day

Diabetes Mellitus

- Managing Acute Illness
 - o Still continue to take medications
 - o Contact doctor if unable to keep food/fluids down;
 - o Monitor glucose q4hrs
 - o Stay hydrated!!!

Calculating Appropriate Fat Calories Intake

- Approx. 20% to 35% of total calories should come from fat
- Less than 10% should come from saturated fat sources.

Body Stress Response Teaching

- Stress causes protein catabolism
- Stress causes increase in blood glucose
- & increased metabolism
- Eat foods high in protein
- Avoid the things that are stressing you! Duh

GERD Dietary Recommendations

- Avoid known trigger foods
- Avoid tight fitting clothes
- Sit upright for 30mins after eating
- Avoid eating 2 hours before bed
- DO NOT LAT FLAT (Head elevated 6 to 8inches)
- Avoid large meals or bedtime snacks

Dysphagia Interventions

- **Modify food textures for swallowing ease**
- **High-Fowlers**
- Oral care to help
- Allow adequate time for meals
- Medications taken with at least 8oz of water
- **Avoid thin liquids and sticky foods!**

Foods to Manage Diarrhea

- Foods high in fiber (lentil, peas, broccoli, beans, pears, almonds, avocado, carrots)

Dietary Recommendations During Lactation

- Breastfeeding women need to increase caloric intake based on the infants age
- For the first 6 months, an extra 330 calories are recommended
- Increasing to 400 extra calories for the remaining 6 months of the first year.

Expected Weight Range for 6-month-old

- Birth weight should double by 6 months and triple by a year.
- The child should gain 5 to 7oz per week.
- Growth should be in 1 inch a month for proper development.

Identifying Low-Phosphorus Foods

- Beef
- Chicken
- Seafood
- Turkey
- Noodles
- Eggs
- Rice
- Macaroni
- Soy/almond milk
- AVOID BREADED MEATS AND MOST DAIRY!

Heart Healthy Diet

- Low fat/cholesterol diet
- Cholesterol should be less than 200mg/daily
- Sodium should be less than 2,300 daily
- Increase fiber, carbs, omega 3, folate, and vitamins B 6 & 12.
- Limited saturated fats, fried foods, butter, salt, and alcohol consumption.
- Increase mono-saturated fats and soluble fiber.

Needs based on BMI

- Low fat diet, increase water intake, and exercise.
- BMI under 24.5 is best
- BMI is calculated based on Weight in Kg/Ht (M2)

Preventing Cancer

- Consume 14g/1,000 cal/daily
- Eat at least 5 servings of fruits and vegetables (vitamin C and A)
- Whole grains rather than refined grains
- Avoid smoked, pickled, and nitrate meats
- Consume polyunsaturated and mono-saturated fats

- Limit alcohol

PART 3: ATI Nutrition Online Practice A Rationales

Controlling Hypertension

- Eat a diet rich in nonfat or low-fat dairy products (avoid whole milk)
- Eat a diet rich in potassium
- Consume 4-5 servings of unsalted nuts, seeds, or legumes per week for a heart healthy diet.
- Drink alcohol in moderation (1 drink or less per day)

Manifestations of Hypoglycemia

- Diaphoresis, irritability and tremors are manifestations of hypoglycemia
- They are tachycardia
- They will NOT have abdominal cramps (associated with hyperglycemia)
- They will NOT have acetone breath also known as fruity breath □ hyperglycemic.

Medication: Nifedipine

- Do not take with grapefruit because it can elevate levels
- Bananas, aged cheese, or milk is not contraindicated.

Stress Management

- Exercise is a benefit to reduce stress.
- Avoid eating 2 to 3 hours before bedtime to promote sleep and reduce stress. (NOT 1HR)

What foods contain the highest amount of zinc?

- 4 oz ground beef patty (red meat provides the majority of zinc in the American diet) ATI
 - o ADDITIONAL FOODS CONTAINING ZINC FROM INTERNET (Nothing else found in ATI)
 - o Lamb: 3 ounces: 6.7mg of zinc
 - o Pumpkin seeds: 1 cup: 6.6mg
 - o Chickpeas: 1 cup: 2.5mg

Reducing the risk of infection in cancer patients

- Discard leftover food after 3 days
- Thaw food in the refrigerator NOT at room temp
- Use home canned goods within 1 year and cook for 10 min prior to eating to reduce risk of infection
- Keep hot cooked food at a temp greater than 60C or 140F

Laboratory results for a patient on TPN

- Prealbumin levels is a sensitive indicator for nutritional status. Level of 30 mg/dl is within the expected range.
- 16 to 40 in within expected range for prealbumin (according to internet, cannot find on ati, probs in med surg book)
- Cholesterol, hemoglobin, and calcium are not indicative of TPN being effective.
- WILL ADD WHAT LABS ARE EFFECTIVE FOR TPN

Laboratory results for a patient with Type 2 Diabetes

- HbA1c level of less than 7% indicates effectiveness in client with Diabetes

Dietary teaching to client with COPD

- Consume foods that are soft in texture and easy to chew.
- Add gravy and sauces to prevent dry mouth
- Drink HIGH-protein, HIGH-calorie formulas between meals
- Eat 6 small meals a day (no large meals) ati

Breastfeeding for a newborn

- Breast milk is nutritionally complete for an infant up to 6 months of age. It will support growth and development.
- Introduce cow's milk AFTER the age of 1 years old.
- You do not need supplemental water to provide an adequate fluid intake. Both breast milk and formula provide an adequate water-to-calorie ratio to meet needs.
- Iron-fortified infant formula IS an acceptable substitute for or supplement to breastfeeding.

Dietary teaching for a 3-year-old

- Do not give peanut butter – it is sticky + large, also a choking hazard. Spread the PB if you want to give it to the child.
- Do not give whole grapes. Cut into smaller pieces that are the size of a nickel.
- Popcorn or hard pretzels are withheld until 4-years-old.
- Whole milk is necessary for neuro development for kids up to 2 years old.
- When kids are older than 2, switch to low-fat or skim milk.

Managing Irritable Bowel Syndrome

- Do not take fruits high in fructose, such as pears. Can increase manifestations IBS.
- Increase probiotics.
- Take peppermint oil during exacerbation of manifestations; it relaxes the smooth muscle in the GI tract and decreases manifestations.
- Choice on ati was *substitute white sugar with honey*. That is incorrect as honey is high in fructose and difficult to absorb. White sugar contains glucose which is easy to absorb and would've help the absorption of fructose.

Education for Mother's planning to Breastfeed

- Plan 5 min feeding on each breast on the first day after birth as it helps promote milk production.

- Breastfeed on demand, when the newborn shows indications of hunger, usually 8 to 12 times per day (Do not go in intervals.. example: I will breastfeed every 6 hours)
- Instruct clients to avoid offering the newborn fluids other than breast milk to promote milk production.
- Do not use supplemental formula or water with artificial nipples to decrease the risk of nipple confusion.

Enteral feedings via an NG tube. Which reduce risk of aspiration if develops abdominal distention

- Assist in ambulation (not bedrest) to relieve distention by promoting peristalsis.
- Position the client on the right (right lateral position) to promote movement of gastric contents through the pylorus and to help relieve distention.
- Do not increase the rate, can worsen distention.
- Request a change to a lower-fat formula when the client is having distention and bloating.

Teaching to pregnant woman with nausea/vomiting

- Eat dry cereal.
- Carbohydrates, like dry cereal, are absorbed quickly and readily raise blood sugar levels, which could reduce nausea.
- Do not increase fat. High fat foods delay gastric emptying time, which increases nausea.
- Avoid caffeinated drinks such as coffee and tea because they can contribute to heartburn.

Counting calories

- Carbohydrate count is NOT dependent on the calorie count.
- Portion size does affect the number of carbohydrates.
- 3-5 carbohydrate choices, or 45G! are allowed per meal (+1-2 carbohydrates for each snack).
- Instruct the difference between starchy and nonstarchy vegetables.

Enteral tube feedings

1. Place in fowler's position
2. Verify tube placement
3. Check the residual
4. Flush tubing with 30ml water
 - Discard opened cans of formula within 24 hours to decrease bacterial contamination.
 - Warm the formula to room temp.
 - Feed the client in small, frequent volumes
 - High calorie formula for diarrhea.

Somogyi phenomenon

- Monitor blood glucose levels during the night. (Somogyi is fast hyperglycemia that occurs in the morning in response to hypoglycemia during the nighttime).

Minerals and side effects

- Calcium can lead to constipation by decreasing peristalsis

- Excessive magnesium can cause diarrhea and cramping.
- Excessive Potassium can cause vomiting.
- Excessive phosphorus does not cause constipation.

Dumping syndrome

- Avoid simple sugars and sugar alcohols which make food mass more hypertonic which causes a greater fluid shift.
- Instruct to lie down.
- Eat small frequent meals to slow gastric emptying.
- Select grains with less than 2g fiber per serving.

Losing weight meal plan

- Do not taste foods while cooking to avoid overeating.
- Control your portion sizes rather than restricting certain foods to prevent cravings.
- Make a list before going shopping because it will help adhere to meal planning and prevent impulse buying.
- Eat 3 to 5 meals a day to prevent hunger and overeating.

Acute pancreatitis labs expectations

- Decreased serum calcium
- Increased serum bilirubin
- Increased serum glucose
- Increased serum alkaline phosphatase

Cardiovascular disease dietary teaching

- Increase dietary potassium to reduce hypertension.
- Increase your dietary fiber intake.
- Decrease intake of trans fatty acids to reduce risk of cardio.
- Eat 2 or more 3.5-oz servings of fatty fish per week to reduce risk of cardiovascular disease.

Wound healing labs

- A Hgb below expected reference range can impair wound healing. (ranges are 14 to 18 for men and 12 to 16 for women.)
- Serum albumin is 3.5 to 5 so anything less can impair wound healing.
- Prothrombin time expected reference range is 11 to 12.5 seconds.
- WBC range is 5,000 to 10,000. Out of reference range can cause wound healing impairment.