Nutrition Therapy Developing Diets for Special Needs

## Huntington College of Health Sciences

- Gene Bruno, MHS Dean of Academics
- HCHS Accredited Distance Learning Institution
  - Associate, Bachelor & Master's degree programs in Nutrition
  - Diplomas in Comprehensive Nutrition, Sports Nutrition & Women's Nutrition.

# What is Nutrition Therapy?

- Dietary modification for conditions or diseases that respond to nutrition intervention.
- Dietary modification for the achievement of certain health/fitness goals.



# The Role of Personal Chefs

- Adapting menu plans to accommodate nutrition therapy
- Easier than you think!
  - Just need to understand basic nutrition principles for main categories of nutrition therapy.



## Incredible Opportunity for Personal Chefs

- Offering clients "value-added" service
  - Keep them happy
  - Help to attract new clients
  - Increase your profitability
  - Stand out from the crowd



# This Seminar

- You'll gain an introductory understanding of nutrition therapy principles for the personal chef.
- We'll cover
  - Lifecycle & Wellness Nutrition Therapy
  - Medical Nutrition Therapy



Let's start at the beginning...



- Extra protein needed for building a new body
  - 1 g/kg body weight daily (or 10-15 g in excess of RDA; e.g, ½ chicken breast).
- Adequate calories (kcal) needed for metabolism
  - First trimester add 50-100 kcal/day
  - Second trimester add 200-300 kcal/day



# Pregnancy – Cont'd

- Adequate calcium needed
  - Over age 19 1000 mg; 19 or under 1300 mg
  - Include dairy or dairy substitutes (e.g., soymilk)
- Omit alcohol, reduce caffeine to two cups coffee daily
- Adequate magnesium to help counter potential increase in blood pressure
  - Use cereal grains, nuts, green vegetables, and seafood



# Pregnancy – Cont'd

- Desired pattern of food intake:
  - 3 cups milk group
  - 7 oz meat or protein substitute
  - 5 fruits and vegetables (including citrus)
  - 7 servings grains (mostly whole grains)
  - 3 servings fat
- Morning sickness Use foods with ginger



# **Sports Nutrition**

#### Protein needs

- 1.2-1.7 g/kg strenuous/endurance sport
- 1 g/kg mild to moderate activities
- Carbohydrate needs
  - 50-60% carbohydrate calories for energy
  - 6-10 g carbs/kg should be consumed daily
  - Whole grain complex carbs should be emphasized
- Adequate fluid intake

# Sports Nutrition – Cont'd

- Adequate calcium for women 1000-1500 mg
  - Prevent osteoporosis, reduce muscle cramping, prevent fractures
- Antioxidant foods (mostly fruit & veggies) may help correct oxidative stress
- Variety of tasty protein drinks
  - Bodybuilders like to use specific branded protein powders

# Weight Loss

- Variety of dietary philosophies
  - Low carb/high protein
  - Low fat/high complex carb
  - "Slow carb", low glycemic index
  - Balanced diet, reduced calories
- Ask client what type of diet desired for weight loss
  - Don't try to change client's philosophy
  - If no philosophy, follow balanced diet



# Weight Loss – Cont'd

- Bottom line Calories need to be reduced regardless of philosophy
  - 1 lb body fat = 3,500 kcal
  - 500 less kcal daily for 7 days = 1 lb lost (variations)
- Complex carbs should be whole grain/high fiber
  - Takes longer to chew, promotes full feeling, slows sugar absorption
- Emphasize fresh veggies



# Weight Loss – Cont'd

- Meats should be lean reduce fat grams (9 kcal vs. 4 kcal)
- Adequate fluid intake
- Eat small amounts, frequently
- Avoid "empty" calories (junk foods, candy, etc.)



#### Different types

- Vegan no animal products
- Ovo-lacto uses egg & dairy products
- Pesca eats fish
- Identify which type of vegetarianism your client follows







- Desired pattern of food intake:
  - 6-12 servings from bread group
  - 2-3 servings legumes, nuts or seeds, or eggs
  - 2-3 servings from dairy; tofu, yogurt or fortified soy milk
  - 4+ servings vegetables
  - 3+ servings fruit
  - 2-3 servings fats and oils



#### Tips

- Used iodized salt if no seafood consumed
- Ovo-lacto vegetarians may be at risk for iron deficiency (found in legumes, tofu, green leafy vegetables, dried fruit, iron-fortified cereals)
- Vegans may be at risk for deficiencies in
  - Protein (soy-based products, legumes, seeds, nuts)
  - Calcium (fortified soy products)
  - Vitamin B-12 (fortified soy products)



#### Asthma

- One of many pulmonary disorders
- Objectives:
  - Prevent distention of stomach to avoid distress & aggravation of asthmatic state
  - Prevent lung infection and inflammation
  - Avoid allergic asthma triggers
- Recommendations:
  - Balanced, small, nutrient dense meals
  - Foods rich in A, B-6, Zinc and C.
    - Broccoli, grapefruit, oranges, sweet peppers, kiwi, tomato juice and cauliflower.
  - Support immunocompetence
    - Quercetin in apples, onions, oranges & berries
    - Selenium in brazil nuts



#### Asthma

- Check with client to identify allergic asthma triggers
  - Common allergic foods: milk, eggs, seafood and sulfites (wine)
- Encourage extra fluids to promote adequate hydration (helps liquefy secretions)
- Regular, balanced diet otherwise



#### Atherosclerosis/Heart Disease

- One of many cardiovascular disorders
- Objectives:
  - Lower elevated serum lipids, esp. cholesterol
  - Initiate and maintain weight loss if obese
  - Reduce blood pressure if high
- Recommendations:
  - Restrict use of saturated fats and cholesterol containing foods
    - Fewer animal proteins, more legumes and veggies
  - Increase use of monounsaturated oils (olive and canola)

#### Atherosclerosis/Heart Disease

- Use plant sterol enriched margarines
- Increase use of flavonoid-rich foods (red wine, grape juice, grapefruit, tea, onions and apples)
- Increase intake of seafood (3-4 times weekly)
- Include adequate fiber (25-30 g daily) oat bran, corn brain, apples, legumes
- Increase intake of soy protein
- Use calorie-controlled diet with increased complex carbs if obese
- If high blood pressure, reduce salt intake

# Heartburn, GERD

- One of many gastrointestinal disorders
- Objectives:
  - Eliminate reflux into the esophagus
  - Achieve/maintain desirable body weight
  - Neutralize gastric acidity
  - Avoid large meals that increase gastric pressure



# Heartburn, GERD

#### Recommendations:

- High protein diet to stimulate gastrin secretion and increase lower esophageal sphincter (LES) pressure
- Low in fat (less fried food, cream sauces, gravies, fatty meats)
- Avoid foods that decrease LED pressure
  - Chocolate, coffee, peppermint, onions, garlic, spearmint, liqueurs and alcohol



# Heartburn, GERD

- Foods to eliminate based on individual experience
  - Citrus juices, tomatoes, tomato sauce
  - Spicy foods
- Fluids can be taken between meals if they cause abdominal distention
- Low-calorie diet can be used to promote weight loss if needed
- Tip Use more bitter herbs and greens if tolerated



## Diabetes

- One of many endocrine disorders
- Objectives:
  - Help maintain stable blood sugar levels
  - Help maintain optimal serum lipids to prevent vascular disease
  - Help maintain healthy weight
- Recommendations:
  - Smaller, more frequent meals throughout the day helps reduce blood sugar fluctuations
  - Utilize more lower glycemic index foods
  - Include adequate fiber in the diet



#### Diabetes



## Diabetes

- Include monounsatured oils in diet (olive, canola) to help blood lipid levels
- Limit alcohol intake to one drink daily with meal
- Low-calorie diet can be used to promote weight loss if needed
- Tip Blueberries contain anthocyanosides that may help prevent diabetic retinopathy



- General guide for all types
- Objectives:
  - Overcome side effects of treatment
  - Prevent/minimize weight loss
  - Promote immune function
- Recommendations:
  - Schedule larger meals earlier in day; and 5-6 small meals as needed (use fruit/protein shakes)
  - Include foods with ginger to minimize nausea





- Intake of protein should be high 1-1<sup>1</sup>/<sub>2</sub> g/kg (or 15-20 g in excess of RDA; e.g, 1 chicken breast) to maintain weight
- Emphasize cruciferous vegetables to promote immunity reduce chemical reactions leading to the development of new cancer cells



## Conclusions

- Many conditions or diseases that respond to nutrition intervention.
- Dietary modification can help achieve of certain health/fitness goals.
- Today was an introduction



## Huntington College of Health Sciences

- Understanding Nutrition I & II
  - Basic and lifecycle nutrition
- Clinical Nutrition
  - Nutrition intervention for conditions
- Sports Nutrition
  - Specific programs for athletes
- Eating Disorders and Weight Management

# Any Questions

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