

## **You Are on What Kind of Diet? Overview of Commonly Ordered Therapeutic Diets**

**Satellite Conference and Live Webcast  
Wednesday, June 22, 2011  
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**Produced by the Alabama Department of Public Health  
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## **Faculty**

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### **Different Reasons for Changes or Restrictions in Diets**

- **Need for weight loss**
  - **Appearance and/or health concerns**
- **To reduce risk of developing health problems**

### **Different Reasons for Changes or Restrictions in Diets**

- **Minimize disease progression if person has condition**
  - **Like diabetes or cardiac disease**
- **In severe disease states, diet restrictions necessary to prolong life**
  - **Renal disease, congestive heart failure**

### **Most Common Diet Restrictions**

- **Total calorie restriction**
- **Change in % of energy nutrients**
  - **Carbohydrates, protein, fat**
- **Mineral and/or vitamin restriction**
- **Specific food restrictions/allergies**
- **Alternate feeding**

### **Calorie Restriction**

- **Reasons for diet:**
  - **Usually for weight loss**
  - **To reduce risk of developing health problems**
  - **Often see in combination with Diabetic or Cardiac restrictions**
  - **Weight loss may reduce hypertension**

### Calorie Restriction

- Principles of diet
  - Diet emphasizes overall reduction in calories
  - 1200, 1500, and 1800 calories are most common calorie levels recommended

### Calorie Restriction

- Calories are divided into:
  - 50% carbohydrates
  - 20% protein
  - 30% fat

### Example of Standard % Energy Nutrients



### Example of Standard % Energy Nutrients

- Carbohydrates from:
  - Fruits
  - Vegetables
  - Starch/whole grains
  - Milk/dairy
    - Low fat or skim

### Example of Standard % Energy Nutrients

- Protein from:
  - Lean meat, fish, poultry
  - Meat substitutes
    - Beans
    - Peas
    - Nuts

### Example of Standard % Energy Nutrients

- Fats from:
  - Monounsaturated
    - Olive
    - Canola oils

### Example of Standard % Energy Nutrients

- Polyunsaturated
  - Corn
  - Safflower oils
- Saturated – limited
  - Meats
  - Butter, dairy

### Example of Standard % Energy Nutrients

- Basic messages
  - Eat more fruits, vegetables, low fat dairy and whole grains
  - Limit meat and fat

### Example of Standard % Energy Nutrients

- Don't 'drink' a lot of your calories
  - Fruit juice
  - Colas
  - Sports drinks
  - Alcohol

### Example of Standard % Energy Nutrients

- The amount of carbohydrates are especially important for diabetics
- For a 1500 calorie diet, the following servings of carbohydrates are usually recommended:

Breakfast	Lunch	Dinner	Snack
3 (45 grams)	4 (60 grams)	4 (60 grams)	1 (15 grams)

### Example of Standard % Energy Nutrients

- Alabama Elderly and Disabled (ED) Waiver Clients receiving frozen Home Delivered Meals should not eat the entire meal at one time

### Example of Standard % Energy Nutrients

- Valley Home Delivered Meals Have the Following Amount of Carbohydrates:

Breakfast	Frozen
8.5 (127 grams)	6.8-7.5 (102-113 grams)

### Change in % Energy Nutrients

- Reasons for diet
  - Generally used for weight loss
    - Promise of rapid loss
  - Certain competitive athletics
  - May focus on specific conditions, like uncontrollable seizures

### Change in % Energy Nutrients

- Principles of diet
  - Change from the standard energy nutrient percentages of 50% carbohydrates, 20% protein, 30% fat
  - The amount of one energy nutrient is increased; the others decreased
  - With some diets carbohydrates are reduced, others fat is reduced

### Change in % Energy Nutrients

- Increased protein, decreased carbohydrates
  - Diets like Atkins, South Beach, etc.
- Severely restricted carbohydrates, limited protein, high % fat
  - Ketogenic diet for uncontrolled seizures

### Resource for Ketogenic Diet

The Charlie Foundation  
<http://www.charliefoundation.org/>



OFFERING HOPE THROUGH THE KETOGENIC DIET

### Altered % Energy Nutrients: Atkins, South Beach, Ketogenic

- Carbohydrates
  - 30-40% total calories
  - Could be limited to less than 10 grams in Ketogenic Diet
- Fruit
  - Very little, or totally eliminated

### Altered % Energy Nutrients: Atkins, South Beach, Ketogenic

- Vegetables
  - Limited, only green or orange
- Starches/grains
  - No starchy vegetable, few whole grains
- Dairy
  - Limited, use whole milk instead of low fat

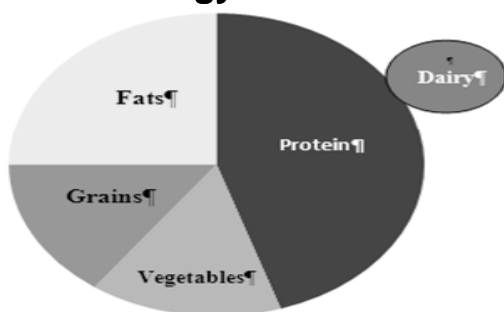
### Altered % Energy Nutrients: Atkins, South Beach, Ketogenic

- Protein – 30-40% total calories
  - None limited
  - Red meat encouraged
  - Fatty meats like bacon and sausage included
  - Meats in breading (fried chicken) not included

### Altered % Energy Nutrients: Atkins, South Beach, Ketogenic

- Fat – 30-35% total calories
  - More saturated fat
  - High fat meats like steak, deli
  - Butter
  - Whole dairy included

### Examples of Altered % Energy Nutrients



### Vitamin/Mineral Restrictions

- Reasons for diet
  - To reduce risk of developing health problems like high blood pressure
  - Minimize disease progression if person has condition
    - Cardiac disease
  - Reduce food – drug interactions

### Vitamin/Mineral Restrictions

- May be necessary to prolong life
  - Renal disease

### Vitamin/Mineral Restrictions

- Principles of diet
  - Sodium restriction for high blood pressure, cardiac disease
  - Vitamin K restriction for certain medications, like Coumadin
  - Sodium, phosphorus, potassium – possibly calcium, protein and fluid restriction for advanced renal disease

### Vitamin/Mineral Restrictions

- Sodium
  - Salt intake is reduced to 1500-2000 milligrams (mg) per day



### Vitamin/Mineral Restrictions

- Sodium
  - Where is the hidden salt?



### Vitamin/Mineral Restrictions

- Sodium
  - Frozen dinners – check the label



### Vitamin/Mineral Restrictions

- Sodium
  - Alabama ED Waiver Clients receiving frozen Home Delivered Meals probably shouldn't eat all the meal at a time
  - Need to limit amount of other meals of the day

### Vitamin/Mineral Restrictions

– Valley Home Delivered Meals Have the Following Amount of Sodium:

Breakfast	Frozen
758-816 milligrams	1081-1132 milligrams

### Vitamin/Mineral Restrictions

- Sodium:
  - Healthy Choice Entree

HEALTHY CHOICE	
Lunch Steamers - Honey Balsamic Chicken <a href="#">Print</a>	
<b>Nutrition Facts</b>	
Serving Size 1 meal (255g)	
Servings Per Container 1	
Amount Per Serving	
Calories 220	Calories from Fat 35
% Daily Value*	
Total Fat 3.5g	5%
Saturated Fat 1g	5%
Trans Fat 0g	
Polyunsaturated Fat .5g	
Monounsaturated Fat 2g	
Cholesterol 25mg	8%
Sodium 540mg	23%
Potassium 670mg	19%
Total Carbohydrate 34g	11%
Dietary Fiber 5g	20%
Sugars 3g	
Protein 13g	



### **Vitamin/Mineral Restrictions**

- Sodium - regular canned vegetables
  - Use low salt canned vegetables OR
  - Rinse and drain regular canned vegetables OR
  - Choose frozen vegetables

### **Vitamin/Mineral Restrictions**

- Sodium – soups
  - Choose low salt soup OR
  - Check the label of the “healthy” version of the regular soup

### **Salt by Any Other Name Still Raises Your Blood Pressure**

- Sodium alginate
- Sodium ascorbate
- Sodium bicarbonate
  - Baking soda
- Sodium benzoate
- Sodium caseinate

### **Salt by Any Other Name Still Raises Your Blood Pressure**

- Sodium chloride
- Sodium citrate
- Sodium hydroxide
- Sodium saccharin
- Sodium stearoyl lactylate
- Sodium sulfite

### **Salt by Any Other Name Still Raises Your Blood Pressure**

- Disodium phosphate
- Monosodium glutamate
  - MSG
- Trisodium phosphate
- Na

### **Vitamin/Mineral Restrictions**

- Vitamin K
  - Helps our blood to clot
  - Can work against blood thinning drugs like Warfarin
  - Vitamin K foods should be eaten in about the same amount should be eaten from week to week

### **Vitamin/Mineral Restrictions**

- Greatly increasing Vitamin K decreases the drugs' effect
- Greatly decreasing Vitamin K can increase the drugs' effect

### **Vitamin/Mineral Restrictions**

- High Vitamin K Foods
  - Broccoli
  - Brussels sprouts
  - Cabbage
  - Greens
    - Collards, mustard, turnip, spinach

### **Vitamin/Mineral Restrictions**

- Lettuce
  - Bib, Red Leaf
- Mayonnaise
- Canola oil
- Green tea

### **Vitamin/Mineral Restrictions**

- Renal restrictions
  - In renal failure the following nutrients are often restricted:
    - Sodium
    - Phosphorus
    - Potassium
    - Possibly calcium, protein, fluid

### **Vitamin/Mineral Restrictions**

- Phosphorus
  - As kidneys fail, problem balancing Phosphorus (P) and Calcium (Ca)
  - Phosphorus levels increase
  - Body 'steals' calcium from bones and weakens them

### **Vitamin/Mineral Restrictions**

- In high Phosphorus levels you can see:
  - Itchy skin
  - Bone and joint pain
  - Brittle bones



### Vitamin/Mineral Restrictions

- High Phosphorus foods
  - Colas
  - Peanut butter
  - Cheese
  - Chicken/beef liver
  - Nuts
  - Ice cream
  - Beer

### Vitamin/Mineral Restrictions

- Potassium
  - Kidneys maintain blood level of Potassium (K)
    - Potassium levels can increase when the kidneys don't work properly
    - Heart can beat irregularly

### Vitamin/Mineral Restrictions

- Heart may stop suddenly
- Don't limit unless told to by physician

### Vitamin/Mineral Restrictions

- High Potassium foods
  - Fruits
    - Bananas
    - Oranges
    - Cantaloupe
    - Prunes
    - Raisins
    - Apricots

### Vitamin/Mineral Restrictions

- High Potassium foods
  - Vegetables
    - Broccoli
    - Potatoes
    - Tomatoes
    - Greens
    - Collards
    - Mustard
    - Beet

### Vitamin/Mineral Restrictions

- Other high Potassium foods
  - Chocolate
  - Coffee (2 cups/day)
  - Brand
  - Salt substitutes
  - Nuts

### Specific Food Restrictions/Allergies

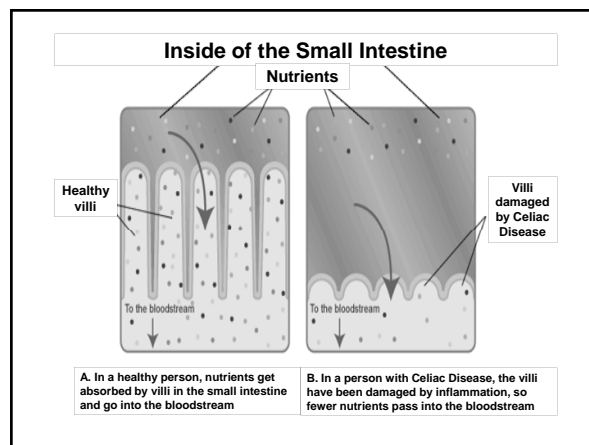
- Reasons for diet:
  - Reduce risk of developing GI upset
  - Food – drug interaction
  - In severe cases, prevent possible loss of life due to anaphylactic shock

### Specific Food Restrictions/Allergies

- Principles of diet
  - Food avoidance to prevent mild-moderate reaction
  - Total elimination of food and monitoring of environment to prevent interference with medications or severe anaphylactic response

### Specific Food Restrictions/Allergies

- Celiac Disease
  - Increased number reported to be gluten intolerant
  - Affects 1 in 133 people in U.S.
  - Disease damages small intestine and prevents absorption of nutrients



### Specific Food Restrictions/Allergies

- Some symptoms of Celiac Disease
  - Abdominal pain, nausea
  - Anemia
  - Easy bruising
  - Diarrhea
  - Fatigue, general tired feeling

### Specific Food Restrictions/Allergies

- Dermatitis Herpetiformis
  - Itchy, blistering skin on elbows, knees, and buttock

### **Dermatitis Herpetiformis**



### **Specific Food Restrictions/Allergies**

- **Gluten found in:**
  - Wheat
  - Barley
  - Rye
  - Many processed foods, medicines, vitamins, and lip balms also contain gluten

### **Gluten Found in Many Products**

- Brown rice syrup
- Breeding and coating mixes
- Croutons
- Energy bars
- Flour or cereal products
- Imitation bacon
- Imitation seafood

### **Gluten Found in Many Products**

- Marinades
- Pastas
- Processed luncheon meats
- Sauces, gravies
- Self-basting poultry
- Soy sauce and soy sauce solids
- Soup bases

### **Gluten Found in Many Products**

- Stuffings, dressing
- Thickeners (roux)
- Communion wafers
- Herbal supplements
- Drugs and over-the-counter medications
- Nutritional supplements

### **Gluten Found in Many Products**

- Vitamins and mineral supplements
- Play dough
- Malt liquor
- Cosmetics

**Where is the Hidden Gluten?  
Check the Label for These Terms**

- Bread crumbs
- Bran
- Bulgur
- Couscous
- Cracker meal
- Durum

**Where is the Hidden Gluten?  
Check the Label for These Terms**

- Farina
- Flour
  - All purpose, bread, durum, cake, enriched, graham, high gluten, high protein, instant pastry, self-rising, soft wheat, steel ground, stone ground, whole wheat

**Where is the Hidden Gluten?  
Check the Label for These Terms**

- Gluten
- Kamut
- Matzoh
  - Matzoh meal – also spelled Mazo
- Pasta
- Seitan

**Where is the Hidden Gluten?  
Check the Label for These Terms**

- Semolina
- Spelt
- Vital gluten
- Wheat
  - Bran, germ, gluten, malt, sprouts
- Wheat grass

**Where is the Hidden Gluten?  
Check the Label for These Terms**

- Whole-wheat berries
- Flavoring
  - Natural and artificial
- Hydrolyzed protein
- Soy sauce

**Where is the Hidden Gluten?  
Check the Label for These Terms**

- Starch
  - Gelatinized starch, modified starch, modified food starch, vegetable starch, wheat starch
- Surimi

### Treatment

- Complete avoidance of gluten
- Use exotic grains such as quinoa, teff, sorghum, buckwheat, amaranth
- Check cosmetics, medications for cross-contamination
- Use supplements
  - Iron, folate, zinc, niacin, B12, calcium, phosphorus

### Treatment

- Immunosuppressive medications
- Endopeptidase enzyme may soon be available

### Resource of Celiac Disease

- For a more complete list of foods:
  - National Digestive Disease Information Clearing House
  - <http://digestive.niddk.nih.gov/ddiseases/pubs/celiac/>
  - [www.celiac.org](http://www.celiac.org)
  - [www.glutenfreemall.com](http://www.glutenfreemall.com)
  - [www.foodallergy.org](http://www.foodallergy.org)

### Specific Food Restrictions/Allergies

- Food-drug interactions
  - Interaction can cause delayed, decreased or increased absorption of medications
  - Common drug interactions are:
    - Drugs with beverages
    - Drugs with foods

### Specific Food Restrictions/Allergies

- Food-drug interactions
  - Drugs with beverages
    - Alcohol
      - Generally should not be taken with any drug
      - Vinegar, apple cider, flavoring extracts with alcohol – avoid with Metformin

### Specific Food Restrictions/Allergies

- Grapefruit juice – avoid with:
  - Buspar (buspirone) – anti-anxiety
  - Quinite (Quinine) – anti-malaria
  - Halcion (Triazolam) - treat insomnia

### **Specific Food Restrictions/Allergies**

- Coreg, Cardizem – heart disease/hypertension
- Lipitor, Zocor, Mevacor (statins) – lowers cholesterol

### **Specific Food Restrictions/Allergies**

- Drugs with Food
  - Tyramine - avoid with:
    - MAO inhibitors (Marplan, Nardil) - used to treat depression, Parkinson's Disease

### **Specific Food Restrictions/Allergies**

- Foods with tyramine are:
  - Aged cheese (swiss, cheddar, blue)
  - Aged sausages (bologna, salami, pepperoni)
  - Liver
  - Yeast extracts

### **Specific Food Restrictions/Allergies**

- Game meat (deer, rabbit)
- Sauerkraut
- Smoked or pickled meats

### **Specific Food Restrictions/Allergies**

- Drugs with Food
  - Chocolate – avoid with:
    - MAO inhibitors (Marplan, Nardil) used to treat depression, Parkinson's Disease

### **Specific Food Restrictions/Allergies**

- Licorice - avoid with:
  - Lanoxin (digoxin) – heart disease
  - Aldactone (spironolactone)-diuretic
  - Hydrodiuril (hydrochlorothiazide)-hypertension/diuretic

**Specific Food Restrictions/Allergies**

- Food-drug interactions
  - Latex allergy
    - The following foods can cross react in someone with a latex allergy:
      - Avocado
      - Banana

**Specific Food Restrictions/Allergies**

- Potato
- Tomato
- Kiwi
- Pineapple
- Melon
- Strawberry
- Nuts – hazelnut, chestnut

**Specific Food Restrictions/Allergies**

- Most common food allergies are:
  - Milk
  - Peanuts
  - Wheat
  - Tree nuts
  - Shell fish

**Specific Food Restrictions/Allergies**

- Symptoms of allergies:
  - Occurs within a few minutes to 1 hour after eating
  - May experience itching in mouth and difficulty swallowing and breathing
  - Nausea, vomiting, abdominal pain

**Specific Food Restrictions/Allergies**

- Skin eruptions – hives, eczema
- Anaphylaxis – drop in blood pressure, lightheaded, weak

**Specific Food Restrictions/Allergies**

- Food allergies
  - Primary treatment is avoidance
  - Have to read labels carefully
  - Some allergies are out grown
  - People with allergies need to have epinephrine available

### Specific Food Restrictions/Allergies



### Most Common Diet Restrictions

- Alternate feeding methods
  - Reduce risk of health problems- malnutrition
  - Necessary to prolong life
  - Altered food consistency
    - Chopping, grinding, blending

### Most Common Diet Restrictions

- Alternate route – tube feedings
  - Enteral – Nasogastric or gastric
    - Into stomach
  - Parenteral – TPN
    - Into blood stream

### Most Common Diet Restrictions

- Altered food consistency
  - Generally easy to do
  - Difficulty may be acceptance and reaching specific consistency
  - Equipment needed:
    - Knife and/or fork
    - Food processor
    - Blender

### Most Common Diet Restrictions

- Altered food consistency
  - Chopped
  - Ground
  - Pureed

### Chopped Consistency





### Ground Consistency



### Pureed Consistency



### Most Common Diet Restrictions

- Alternate feeding methods:
  - Altered food consistency
  - Liquids
  - Thin
    - All liquids
    - No restrictions

### Most Common Diet Restrictions

- Nectar
  - Tomato juice consistency
  - Some liquids will need thickening agent (Thick-It)

### Most Common Diet Restrictions

- Honey
  - Liquids pour very slowly
  - Will need thickening agent
- Pudding
  - Liquids spoonable

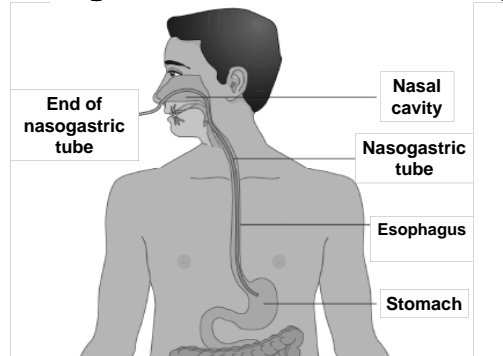
### Most Common Diet Restrictions

- Alternate feeding methods:
  - Alternate route – tube feedings
  - Enteral
  - Nasogastric
    - Should be for short term use, usually no more than 3 months

### Most Common Diet Restrictions

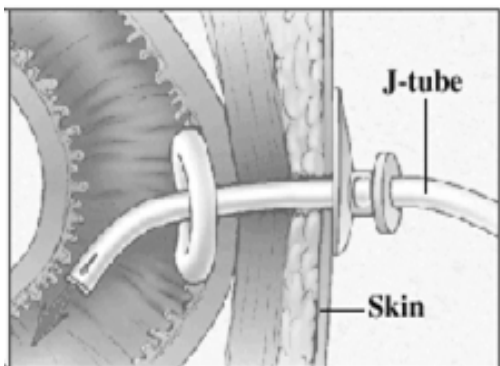
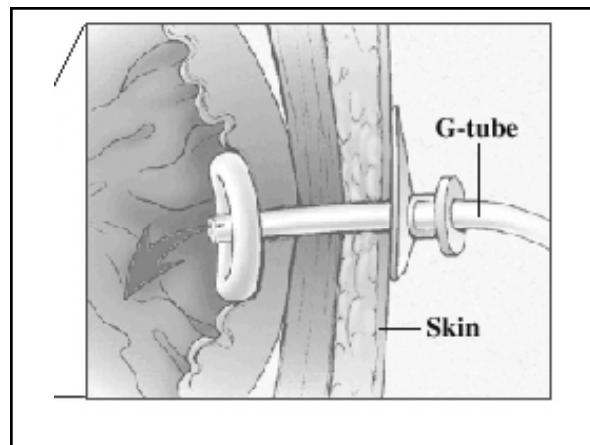
- Gastric
  - When alternate feeding is going to be long term
- Adults - PEG tube
- Children - often see Mic Key

### Nasogastric or NG Tube Feeding

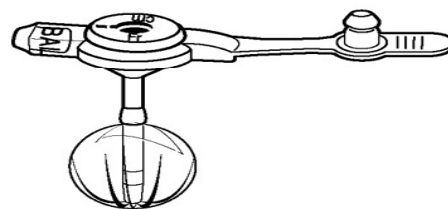


### Percutaneous Endoscopic Gastrostomy PEG Tube

- When the tube goes into the stomach, it is called a G-tube



### Mic Key Button Is Often Used in Children



### **Most Common Diet Restrictions**

- **Alternate feeding methods:**
  - Alternate route – formulas
- Vary based on:
  - **Calories** – 1cal/ml to 2 cal/ml
  - **Digestibility** – fiber or hydrolyzed

### **Most Common Diet Restrictions**

- **Special conditions:**
  - Diabetes
  - Renal
  - Pulmonary distress
  - Wound healing

### **Funding for Formulas**

- **Medicare** – if total tube fed
- **Medicaid** – level varied with state
- **Senior Services** – in AL this is
  - SeniorRX/Wellness
  - <http://www.alabama.gov/silverheader/Welcome.do?url=http://adss.alabama.gov/>

### **Funding for Formulas**

- **Pharmacy/Company programs** –
  - **Abbott Patient Assistance – Medical Nutritional Products**
    - <http://www.needymeds.org/papforms/abbmed0407.pdf>
  - **Partnership for Prescription Assistance**
    - [www.helpingpatients.org](http://www.helpingpatients.org)