Other Modified Diets

Dana Issa Marbu

Vegetarian Diet/s

- **Use**: The use of the vegetarian diet is for individuals wishing to avoid foods that come from animals.
- The diet exclusions vary depending on the type of vegetarian.
- Vegetarian-style eating patterns have been associated with improved health outcomes.
- lower levels of obesity, a reduced risk of cardiovascular disease, and lower total mortality.

Vegetarian Diet

- **Types of vegetarian Diet:**

1. **Vegan or Total Vegetarian Diet.** meat, seafood, eggs, and dairy and foods that contain them, even honey.
2. **The Lacto-Vegetarian Diet.** meat, seafood, eggs, and foods that contain them. Instead they eat consumes plant foods, **cheese**, and other **dairy products**.
3. **Lacto-Ovo-Vegetarian Diet**. excludes meat, and seafood and foods that contain them. Instead they eat plant foods, **cheese**, other **dairy products**, and **eggs**.
4. **Semi-Vegetarian Diet.** excludes **red meat** but may include chicken or fish and most other animal products.

Vegetarian Diet

- **Adequacy.**

- The suggested food plans include foods in amounts that will provide the DRIs.

- **Diet Principles.**

- Provide adequate nutrients by including mostly foods rich in nutrients and fortified.
- Limit low-nutrient foods, sweets, and fats.
- Limit highly processed grains and other refined carbohydrates to ensure adequate intake of trace nutrients

Vegetarian Diet

- Avoid excess cholesterol intake by limiting eggs to three or four egg yolks a week for those who consume eggs.
- Plant proteins alone can provide enough amino acids when a variety of plant proteins are eaten throughout the day and the total caloric intake meets the individual's energy needs.
- Protein needs may be higher. Increase in the total quantity of these foods or inclusion of more beans and soy products is recommended. Substitutes for 1 ounce of meat are:
  - 8 ounces fortified soy milk.
  - ½ cup cooked beans.
  - 2 tablespoons peanut butter or other nut butter
  - 2 tablespoons nuts or seeds
  - 1 whole egg or 2 egg whites (Lacto-Ovo-Vegetarian)

Vegetarian Diet

- Vegans in particular who do not consume fish, eggs may have lower levels of **omega-3 fatty acids** / DHA and EPA (brain development).
- Additional plant-based n-3 fatty acid a-linolenic acid (ALA) can be consumed and used for conversion into DHA and EPA. Good sources of ALA for vegans are flaxseed, walnuts, canola oil and soy.
- **Calcium** intake of vegans tends to be low, calcium fortified foods or dietary supplements should be used
- **Vitamin D.** Sun exposure and intake of fortified foods are important in meeting recommended vitamin D needs.
  - fortified with vitamin D include milk, some brands of soy milk, rice milk, and orange juice, and some breakfast cereals.

Vegetarian Diet

- **Iron** in plants is not as readily absorbed as that in meats.
- Foods rich in vitamin C can enhance absorption by reducing the inhibitory effects of phytate.
- The following can also interfere with iron absorption: tea, herbal tea, coffee, and cocoa.
- **Vitamin B12,** only animal products contain vitamin B12, diets of vegetarians who eat dairy products and eggs are rarely deficient in vitamin B12.
- Good fortified sources include fortified cereals and a daily vitamin supplement.

Vegetarian Diet

- Phytate, or phytic acid, is a naturally occurring compound found in all plant foods.
- here were concerns that foods high in phytates might reduce the absorption of minerals.
- recent studies have shown that this so-called “anti-nutrient” effect occurs only when large amounts of phytates are consumed.
- Mineral-absorbing enhancers ??

Vegetarian Diet

- The two forms of dietary iron are **haeme iron** and **non-haeme iron.**

- **Haeme iron** is found only in meat, poultry, seafood, and fish, so heme **iron** is the type of iron that comes from animal proteins in our diet.
- **Non-haeme iron**, by contrast, is found in plant-based foods like grains, beans, vegetables, fruits, nuts, and seeds.
- **milk and egg. ?**
- **Why haem iron absorbed more efficiently ?**

Vegetarian Diet

- **Zinc**. The absorption of zinc is decreased by phytic acid (commonly higher in vegetarian diets). Vegetarians usually have adequate zinc status. Foods containing zinc include fortified cereals, beans, wheat germ, nuts, and seeds.
- **Iodine.** A diet including iodized salt is recommended, it is important to note that Kosher and sea salt and tamari typically do not contain iodine.
- Read product labels carefully to avoid hidden ingredients such as meat extracts, animal fats, eggs, and milk.

Vegetarian Diet

Breakfast

½ c. orange juice
1 egg or 1 Tbsp. peanut butter
½ c. oatmeal
1 slice whole wheat toast
1 c. fat-free milk
Hot beverage
Sugar, pepper (optional)

Lunch

2 oz. meatless burger, soy-based
½ c. mashed potatoes (made without chicken stock)
½ c. mixed vegetables
1 oz whole wheat roll
1 tsp. soft margarine
1 c. fat-free milk
Water

Supper

1 oz. low-fat cheese
1 oz. seasoned pinto beans served over
1 c. leafy greens salad
1 Tbsp. sunflower oil and vinegar dressing
2 tomato slices
1 whole-grain bagel
1 tsp. soft margarine
½ c. fruit cocktail
1 c. fat-free milk
Water

Snack Ideas

1 c. cantaloupe
½ c. carrot sticks
3 c. popcorn

Breakfast

½ c. orange juice
1 Tbsp. peanut butter
½ c. oatmeal made with fortified soy milk
1 slice whole wheat toast
1 c. fortified soy milk
Hot beverage
Sugar, pepper (optional)

Lunch

2 oz. meatless burger, soy-based
½ c. mashed potatoes made with fortified soy milk
½ c. mixed vegetables
1 oz. whole wheat roll
1 tsp. soft margarine
1 cup strawberries with 3 graham cracker squares
1 c. fortified soy milk

Supper

2 oz. seasoned pinto beans served over
1 c. leafy greens salad
1 Tbsp. sunflower oil and vinegar dressing
2 tomato slices
1 whole-grain bagel
1 tsp. soft margarine
½ c. fruit cocktail
1 c. fortified soy milk

Snack Ideas

1 c. cantaloupe
½ c. carrot sticks
3 c. popcorn

Vegetarian Diet

- **Possible health benefits of vegetarian diet:**

- Obesity/ healthier body weight/ high fiber food.
- Hypertension/ lower blood pressure.
- Heart disease/ incidence of heart disease much lower/ higher anti-oxidants and fiber.
- Cancer/ lower processed meat.

Food Allergies and Intolerances

Lactose Restricted Diet

- **Use**: The Lactose Restricted Diet is used for patients who cannot digest lactose, the carbohydrate found in **milk.**
- Lactose intolerance results from diminished production of lactase enzyme in the small intestine.
- The degree of sensitivity will vary from person to person; consequently the diet should be individualized.
- **Adequacy:** The diet will provide the DRIs, however, there may be a risk for deficiencies in **calcium**, **riboflavin**, and **vitamin D** depending on food choices.

Lactose Restricted Diet

- **Diet Principles**

- The diet limits lactose-containing foods according to individual tolerance.
- Less than 12 grams per day is generally recommended. Foods with small amounts of lactose are often tolerated when eaten in small portions or as part of a meal. Fermented dairy products like yogurt and aged cheeses are often tolerated.
- Read all labels carefully to identify foods containing lactose. Look for the words **lactose, milk, nonfat dry milk, milk solids, skim milk, whey, Casein.**
- Other prepared foods that may contain lactose include commercial breads and baked goods, processed breakfast cereals

Lactose Restricted Diet

- Many prescriptions and over-the-counter medications contain lactose.
- Calcium may be supplemented to provide 1,000–1,500mg/day as needed.

Lactose Restricted Diet

Table 11.11 Lactose Restricted Diet

Food for the Day	Recommend	Limit to Tolerance
Vegetables *1–4 cups*	All vegetables and vegetable juices	Any vegetable prepared with milk or cheese sauce; instant potatoes
Fruits *1–2.5 cups*	All fruits and fruit juices	Fruit drinks containing lactose
Grains *3–10 ounce-equivalents*	Crackers, Italian, French, or Jewish rye bread; cereals, rice, pasta, hominy, oats, barley, wheat, cornmeal, tortillas, rice and popcorn	Any bread, cereal, or grain prepared with milk or milk products; instant cereals; dry cereals containing lactose or milk
Milk products *2–3 cups*	Soy, rice, almond, hemp, oat milk Lactose-free milk products. Milk treated with lactase enzyme	Milk and milk products; butter- milk, yogurt, cocoa mixes All forms of cheese made with milk
Protein foods *2–7 ounce-equivalents*	All fresh meat, poultry, fish, shellfish; eggs; peanut butter, dried beans, lentils; nuts, seeds, tofu, kosher prepared meat products	Meat or meat substitute prepared with milk; cold cuts, wieners, or other meat with added lactose; powdered eggs
Oils, Solid Fats *Use sparingly*	Milk-free margarine (kosher margarines do not contain milk); some nondairy cream substitutes; vegetable oils, shortening, lard, bacon, salad dressings made without milk or cheese Olives, nuts and seeds Gravy made without milk	Butter, margarine, salad dressings, mayonnaise-type salad dressings, sour cream, cream cheese, cream
Added Sugars *Use sparingly*	Desserts made without milk; fruit ices, popsicles, gelatin; angel food cake, fruit rollups, sugar, corn syrup, maple syrup, honey, jam, jelly, marshmallows, hard candies, gum drops, jelly beans and fruit pie fillings	Any dessert, pudding or mix containing lactose; sherbet, ice cream, frozen yogurt, milk chocolate, caramels, cream or chocolate candies
Fluids/Soup	Broth-based soups; soups made with water, soy milk or other nondairy substitutes Plain coffee, tea, soft drinks, beer, wine, distilled spirits	Cream soups, commercial soups containing milk or lactose Drink mixes containing milk or lactose
Others	Popcorn, pretzels, plain potato and corn chips; condiments without added milk	Cheese flavored crackers, cheese curls

(Continued)

Gluten Restricted Diet

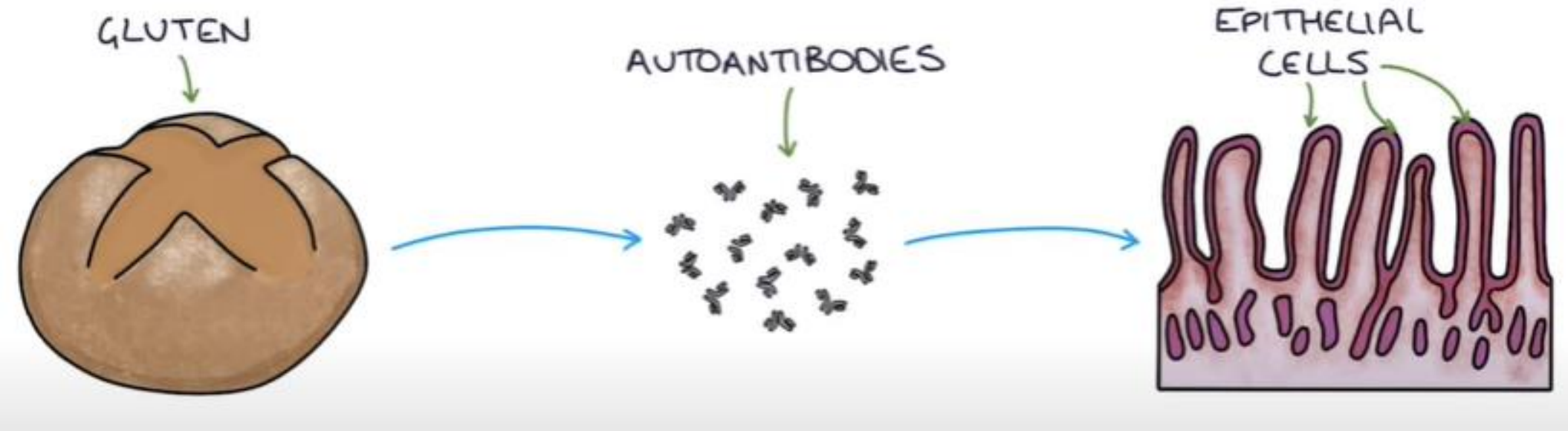
- Gluten is a protein found in **wheat, rye, and barley**. It is found mainly in foods but may also be in other products like medicines, vitamins, and supplements.

Gluten Restricted Diet

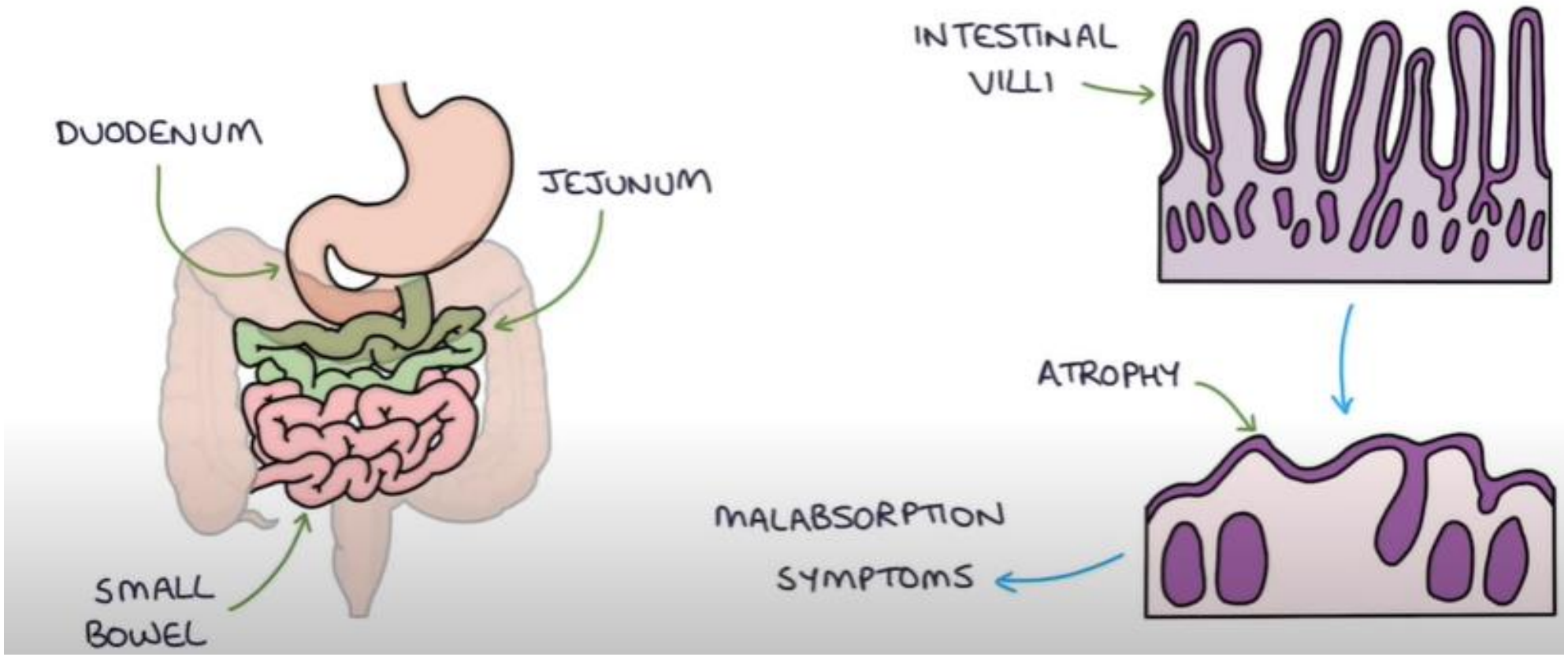
- **What is the difference between:**
- Gluten sensitivity/ non- Celiac gluten sensitivity and Celiac disease.

- **Celiac disease** is an immune reaction to eating gluten. Eating gluten triggers an **immune response in your small intestine**. Over time, this reaction damages your small intestine's lining and prevents it from absorbing some nutrients (malabsorption) (ingestion of gluten triggers your immune system to attack it own tissues)
- **Gluten sensitivity:** is a reaction to gluten.
- People who are gluten sensitive test negative for celiac disease but find symptoms after removing gluten from their diet

Gluten Restricted Diet



Gluten Restricted Diet



Gluten Restricted Diet

- There is no explanation for why **non-celiac gluten sensitivity** occurs.
- Some researchers theorize that the problem in those told they have gluten sensitivity may not be gluten at all.
- Instead, it may be some other compound found in wheat (and possibly in barley and rye, which are closely related to the grain.

- While **celiac disease** is associate with genetic factors and other autoimmune disease in particular diabetes type 1.

Gluten Restricted Diet

- **Symptoms**

1- Failure to thrive/ celiac disease

2- Diarrhea

3- weight loss

4- Anemia (due to malabsorption of iron, folate and B12).

5- **Dermatitis herpetiformis(DH)**

- **Diagnosis**

1- There is no specific test for diagnosis gluten sensitivity.

2- High antibodies level in the blood and severe damage in the intestinal wall due to chronic inflammation.

Gluten Restricted Diet

- **Dermatitis herpetiformis (DH).**

- DH is caused by a sensitivity or intolerance to gluten.
- The gluten combines with an antibody from the intestines.
- As the gluten and antibody circulate in the blood, they clog small blood vessels in the skin, causes the rash.

Gluten Restricted Diet

- Complications associated with celiac disease are:

- **Lactose intolerance:** once the intestinal lining is damaged, eating dairy products can also cause problems like abdominal pain, diarrhea, etc.
- **Malnutrition:** As the villi are damaged, nutrients cannot be absorbed and this leads to malnutrition & weight loss.
- **Loss of calcium and bone density**: Loss of calcium absorption can lead to bone damage.

Gluten Restricted Diet

- **Use:** The Gluten Restricted Diet is used for people with celiac disease.
- Gluten sensitivity, gluten intolerance, or dermatitis herpetiformis.
- **Adequacy:** The suggested food plan includes foods in amounts that will provide the quantities of nutrients.
- Patients may have **malabsorption problems**, therefore calorie, protein, vitamin, and mineral intake should be monitored with optimal energy and nutrient intake provided.

Gluten Restricted Diet

- **Diet Principles:**

- This diet restricts gluten by avoiding foods, beverages, and medications containing **wheat**, **rye**, and **barley**.
- Gluten-free oats may be used if tolerated.
- Grains and starches that may be used include **corn**, **rice**, **potato**, **soy**,, **beans**, **quinoa**, and **nut flours.**
- It is important to carefully read ingredient labels on all prepared foods to determine possible gluten content.

Gluten Restricted Diet

- **Modified food starch, hydrolyzed vegetable proteins, soy sauce, malt or malt flavoring may indicate gluten content.**

- Care to avoid cross contamination in food preparation is essential.
- When first diagnosed with celiac disease, many people are also lactose intolerant to damage in the intestinal wall.

- This usually goes away as they avoid gluten and the gut heals. which may greatly decrease symptoms.

Gluten Restricted Diet

Food for the Day	Recommended	Avoid
Vegetables *1–4 cups*	Vegetables may be raw or cooked; fresh, frozen, canned, dried/dehydrated, or 100% vegetable juices	Creamed or breaded vegetables; some canned baked beans
Fruits *1–2.5 cups*	Fruits may be fresh, frozen, canned (in own juices or light syrup), dried (with no sugar added) or 100% fruit juice	Any fruit containing wheat flour used as a thickener
Grains *3–10 ounce-equivalents*	Rice, wild rice; gluten-free breads, cereals, quick breads; gluten-free pasta, noodles Buckwheat, millet, popcorn, gluten-free oats	Any made with wheat, rye, oats, barley; triticale, spelt, wheat germ, wheat starch, graham, durum, semolina, couscous
Dairy products *2–3 cups*	Fat-free or low-fat (1%) milk, low-fat or fat-free, nondairy milks (soy, almond, rice), low-fat yogurt Aged hard cheeses	Malted milk beverages
Protein foods *2–7 ounce-equivalents*	Lean or very lean cuts of beef, skinless poultry, fish, dry beans or legumes, eggs (omega-3 enriched eggs), nuts, and seeds	Creamed or breaded meat, fish, poultry unless made with allowed flours; commercial products containing restricted grains; some canned meat products; processed lunch

Gluten Restricted Diet

Food for the Day	Recommended	Avoid
Oils, Solid Fats *Use sparingly*	Canola oil, flax seed oil, sesame oil, olive oil	Any salad dressings or mayonnaise containing restricted grains
Sweets/Desserts *Use sparingly*	Cakes, cookies, pastries made with gluten-free grains; sorbet and fruit ices; premium ice cream; gelatin; maple syrup, jam, jelly; marshmallows	Cakes, cookies, pastries made with restricted grains, ice cream cones; some puddings, ice cream with additional toppings
Fluids/Soup	Water and other fluids, such as coffee, tea, 100% fruit or vegetable juice Homemade broths and soups made with allowed ingredients	Flavored coffees; beer, soups thickened or made with restricted grains
Others	Popcorn; corn tortillas; some plain potato and corn chips	Condiments containing restricted grains

Phenylalanine Restricted Diet

- Phenylalanine is an essential a.a
- Phenylketonuria is caused due to change in the phenylalanine **hydroxylase (PAH) gene**. This gene helps create the enzyme needed to break down phenylalanine.
- **Symptoms:**

- A musty odor in the breath, skin or urine, caused by too much phenylalanine in the body.
- Seizures due to accumulation of phenylalanine in the brain.
- Lighter skin, hair and eye color than family members, because phenylalanine can't transform into melanin.
- Delayed development and Mental health disorders

- **A PKU screening test is a blood test given to newborns 24–72 hours after birth.**

Phenylalanine Restricted Diet

- Phenylalanine plays a key role in the **biosynthesis** of other **amino acids and is important in the structure and function of many proteins and enzymes.**

- Phenylalanine is converted to **tyrosine** used in the biosynthesis of **dopamine** and **norepinephrine** neurotransmitters.

Phenylalanine Restricted Diet

- **Use:**
- The phenylalanine restricted diet is used for people who lack the enzyme (phenylalanine hydroxylase).
- Necessary to convert phenylalanine to tyrosine, causing a disorder called phenylketonuria (PKU).
- High amounts of phenylalanine are toxic to the brain and can cause mental retardation.
- Prior to newborn screening, individuals with PKU were not identified until the brain damage had occurred.
- Even though a phenylalanine-restricted diet will not reverse the mental retardation that may have occurred, it may reduce some of the behavior problems these individuals may have

Phenylalanine Restricted Diet

- When newborn screening began, infants were placed on the diet at diagnosis and kept on the diet until 5 to 8 years.
- It was thought safe to go off the diet because the most rapid time of brain development was over.
- As more individuals have been off the diet for longer periods of time, it is apparent that high amounts of phenylalanine continue to be a brain toxin and can cause varying degrees of brain damage.
- Currently, individuals begin the diet at diagnosis and the recommendation is to continue the diet for life so brain damage does not occur.

Phenylalanine Restricted Diet

- **Treatment:**

- **Tetrahydrobiopterin or BH4** helps in **degradation of amino acid phenylalanine** and in the **biosynthesis** of the **neurotransmitters.**

- Clinical trials indicate that Kuvan (synthetic name) taken orally enhances the efficiency of phenylalanine hydroxylase in some individuals with PKU.

- This can lead to decreased serum phenylalanine levels or increased natural protein intake.

Phenylalanine Restricted Diet

- **Treatment:**
- Use of large neutral amino acids (LNAA) supplementation e.g. tryptophan and tyrosine.
- These are thought to lower the phenylalanine in the brain by competing with phenylalanine to cross the blood-brain barrier by the transporters.
- The particular effect reflects the competitive nature of **the transporter for LNAA at the blood-brain barrier.**
- For example, raising blood tryptophan or tyrosine levels raises their uptake into brain.
- These can be used by individuals who are off diet and find it difficult to return to a phenylalanine restricted diet.
- They improve their mood, memory, or behavior.

Phenylalanine Restricted Diet

- **Adequacy:**
- Depending on the type of the special metabolic formula used, the suggested food plan **may** provide the DRIs.
- **Diet Principles:**
- The diet eliminates all foods containing natural protein such as meat, fish, poultry, milk, yogurt, cheese, eggs, nuts, seeds, legumes, and peanut butter.
- Foods containing **aspartame** are also eliminated because one of the **byproducts** of aspartame is phenylalanine. Yet, saccharin is allowed.

Phenylalanine Restricted Diet

- Adequate protein intake is achieved with the use of a **metabolic formula** that has the phenylalanine removed while the rest of the amino acids remain.
- Most of the metabolic formulas also provide fat, carbohydrate, vitamins, and minerals.
- A **prescribed amount** of phenylalanine is allowed from natural food sources like fruits, vegetables, and grain products.
- Low protein foods such as pastas, breads, and other baked goods are available to provide calories and variety to the diet without too much phenylalanine.

Phenylalanine Restricted Diet

Table 11.15 Phenylalanine Restricted Diet

Food for the Day	Recommended	Avoid
Vegetables *1–4 cups*	All fresh, frozen, canned	Baked beans and other legumes
Fruits *1–2.5 cups*	Fresh, frozen, canned, dried, fruit juices	None
Grains *Amount specified by registered dietitian*	All that will fit within protein allotment. May need to use low protein grains	None
Dairy products	Special metabolic formula in the amount prescribed by registered dietitian	All regular milk, yogurt, cheese

(Continued)

Phenylalanine Restricted Diet

Table 11.15 (*Continued*)

Food for the Day	Recommended	Avoid
Protein foods	None	All meat, poultry, fish, eggs, dried beans or peas or peanut butter
Oils, Solid Fats	All are allowed	None
Added Sugars	All that will fit into the protein allotment which may include gelatin, sorbets, fruit ices	Those too high in protein
Fluids	Water and other fluids, such as coffee, tea, fruit or vegetable juice, lemonade, regular soda	Beverages containing aspartame, regular milk

Guidelines for peptic Ulcer, Gastroesophageal Reflux disease and Hiatal Hernia

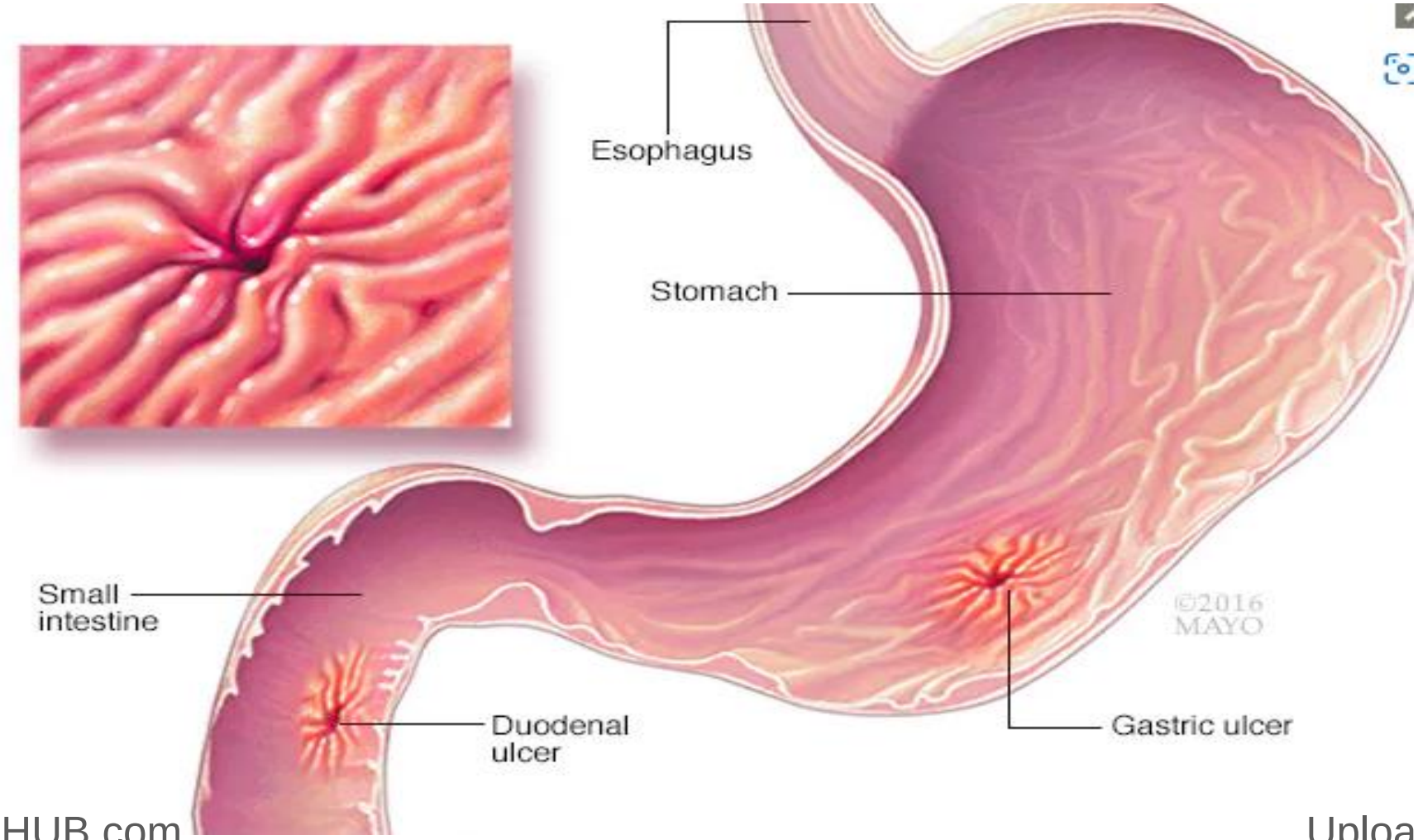
Peptic Ulcer

- Peptic ulcers are open sores that develop on the inside lining of the stomach and the upper portion of your small intestine.
- Peptic ulcers occur when acid in the digestive tract eats away at the inner surface of the stomach or small intestine.
- The acid can create a painful open sore that may bleed.
- Your digestive tract is coated with a mucous layer that normally protects against acid. But if the amount of acid is increased or the amount of mucus is decreased, you could develop an ulcer.

Peptic Ulcer

- **Peptic ulcers include:**
- **Gastric ulcers:** that occur on the inside of the stomach.
- **Duodenal ulcers:** that occur on the inside of the upper portion of your small intestine (duodenum).
- **Symptoms**
- Burning stomach pain
- Feeling of fullness, bloating
- Intolerance to fatty foods
- Heartburn
- Nausea

Peptic Ulcer



Peptic Ulcer

- There is no evidence that a **bland diet** plays a significant role in the treatment of gastrointestinal disorders.
- Most stomach ulcers are caused either by infection with a bacterium called **Helicobacter pylori (H. pylori)** or by use of pain medications, and **nonsteroidal anti-inflammatory drugs (NSAIDs)** such as aspirin and ibuprofen.
- Most **H. pylori-related ulcers** can be cured with **antibiotics**.
- **NSAID-induced ulcers** can be cured with time, stomach protective medications, antacids, and **avoidance of NSAIDs.**

Peptic Ulcer

- **A bacterium.** Helicobacter pylori bacteria :

- commonly live in the mucous layer that covers and protects tissues that line the stomach and small intestine.
- Often, the H. pylori bacterium causes no problems, but it can cause inflammation of the stomach's inner layer, producing an ulcer.
- It's not clear how H. pylori infection spreads.
- transmitted from person to person or through food and water.

Peptic Ulcer

- **Risk factors**

- **Smoke.** Smoking may increase the risk of peptic ulcers in people who are infected with H. pylori.
- **Drink alcohol.** Alcohol can irritate and erode the mucous lining of your stomach, and it increases the amount of stomach acid that's produced.
- **Chronic stress.**
- **Eat spicy foods.**

- Alone, these factors do not cause ulcers, but they can make ulcers worse and more difficult to heal.

Peptic Ulcer

- **Left untreated, peptic ulcers can result in:**

- **Internal bleeding.** Bleeding can occur as **slow blood loss** that leads to anemia
- Or **severe blood loss** that may require hospitalization.
- **Obstruction.** Peptic ulcers can block passage of food through the digestive tract, causing you to become full easily.
- lose weight either through swelling from inflammation or through scarring.
- **Gastric cancer.** Studies have shown that people infected with H. pylori have an increased risk of gastric cancer.

Peptic Ulcer

- **Treatment**
- No evidence supports the use of a traditional **bland diet** to decrease gastric acid secretion or increase the rate of healing.
- The diet should be primarily one that is liberal and individualized because patients differ as to specific food intolerances.
- There are a few foods that can stimulate/ trigger gastric secretion and possibly irritate the stomach.
- It is a limited list and should be based on patient tolerance along with lifestyle changes for the treatment of peptic ulcers.

Peptic Ulcer

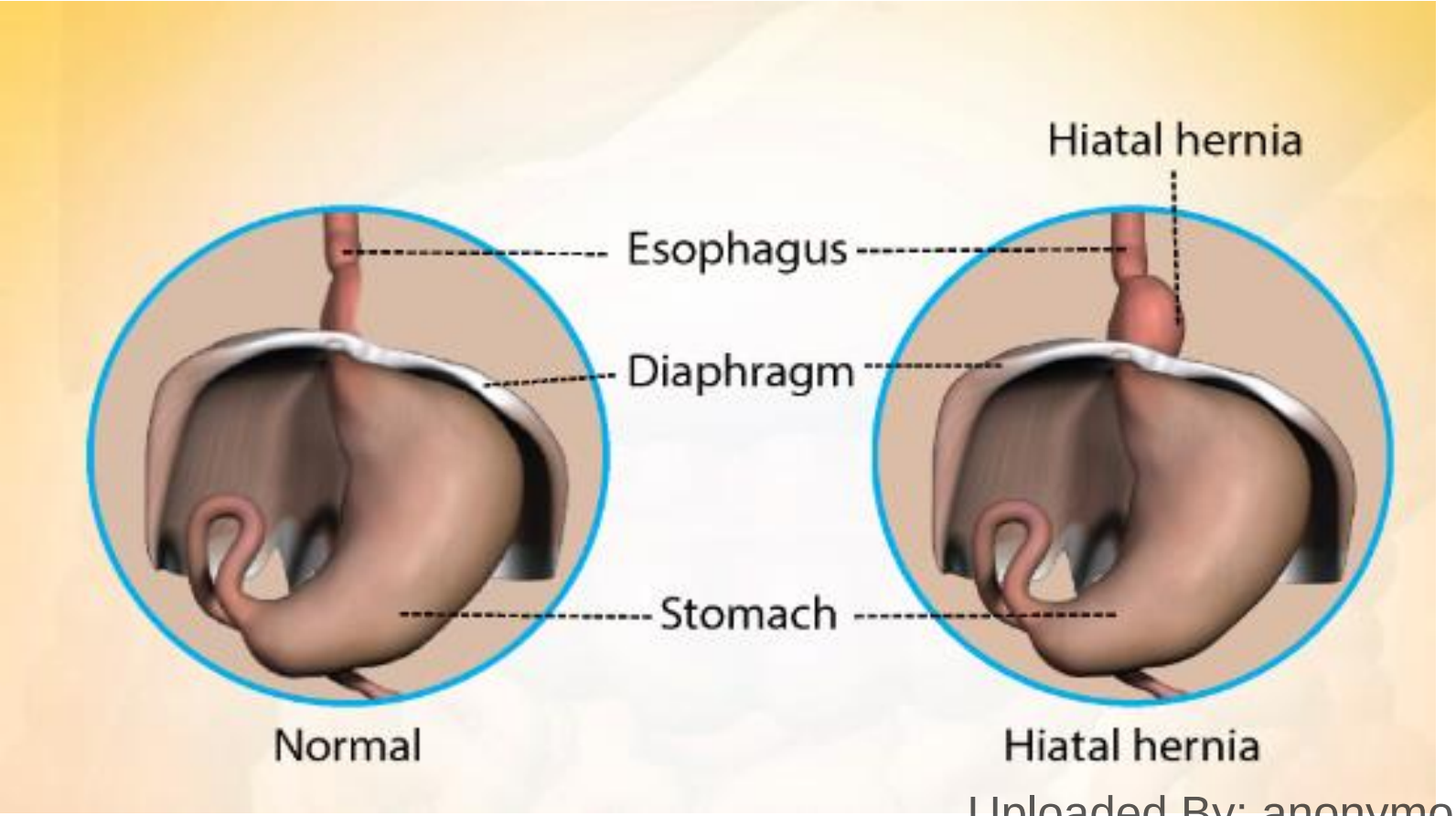
- **The following recommendations are made:**

- Avoid alcohol, drinks containing caffeine (e.g., coffee, tea, decaffeinated coffee and tea, cola type soda), chocolate, cigarette smoking, salicylates (aspirin), and other NSAID agents.
- Avoid frequent meals and or bedtime snacks to prevent increased acid secretion.
- Foods and seasonings that stimulate gastric acid secretion such as black pepper, garlic, cloves, and chili powder should be limited.

GERD and Hiatal Hernia

- Hiatal hernia occurs when a portion of the stomach bulges up into the esophagus.

- **Symptoms**:
- Heartburn.
- Chest pain.
- Stomach pain.



GERD and Hiatal Hernia

- **Causes:**

- A hiatal hernia occurs when **weakened muscle tissues** make the stomach bulge and push through the diaphragm. The exact cause is not known. The risk factors could be:
- Aging.
- Increased abdominal pressure due to pregnancy, obesity, severe cough.
- constipation.
- Frequent vomiting or coughing.

GERD and Hiatal Hernia

- **Symptoms**:

- Heartburn.
- Chest pain.
- Stomach pain.

- Sour taste in the back of the throat, when this happens frequently it is called GERD (Gastroesophageal reflux disease).
- A chronic digestive disease where the liquid content of the stomach refluxes into the esophagus.

GERD and Hiatal Hernia

- Avoid foods and beverages that contribute to indigestion: chocolate, coffee, and other highly caffeinated beverages; peppermint; spearmint; high fat foods; tomato products; and alcoholic beverages.

- Some sources also suggest limiting citrus fruits if not well tolerated

- Herbal teas that do not contain peppermint or spearmint are generally well tolerated.

GERD and Hiatal Hernia

- Stop smoking to reduce the effect of **tobacco** on stomach acid production and relaxation of the esophageal muscles.
- Reduce weight if obese.
- Avoid eating 3 hours before bed time.
- Raise the head of the bed by 6 inches.
- Exercise for at least 30 minutes several times per week.
- Avoid wearing tight fitting clothing.

GERD and Hiatal Hernia

Table 11.17 Suggested Menu Plan for Peptic Ulcer, GERD, and Hiatal Hernia

The menu plan for the General Diet should be used. Avoid items from the Foods Not Recommended list and consider lifestyle changes indicated. Adjust contents of meals and meal times to accommodate individual needs. Introduce new foods one at a time in small quantities to check for potential intolerance.

Gout Diet

- Gout is a common and complex form of arthritis.
- It's characterized by sudden, severe attacks of pain, swelling, redness and tenderness in one or more joints, most often in the **big toe.**
- An attack of gout can occur suddenly, often waking you up in the middle of the night with the sensation that your big toe is on fire.

Gout Diet

- Gout occurs when **urate crystals accumulate** in your joint, causing the **inflammation** and **intense pain** of a gout attack.
- **Urate crystals** can form when you have **high levels of uric acid** in blood.
- The body produces uric acid when it **breaks down purines/** substances that are found naturally in your body.
- Purines are also found in certain foods, including **red meat and organ meats**, such as liver.
- **Normally**, uric acid **dissolves** in the blood and passes through kidneys into your urine.
- But sometimes either your body produces too much uric acid or your kidneys excrete too little uric acid, When this happens, uric acid can build up.

Gout Diet

- **The signs and symptoms of gout almost always occur suddenly, and often at night. They include:**

- **Intense joint pain.** Gout usually affects the big toe, but it can occur in any joint. Other commonly affected joints include the ankles, knees, elbows.
- **Lingering discomfort.** After the most severe pain, some joint discomfort may last from a few days to a few weeks. Later attacks are likely to last longer and affect more joints.
- **Inflammation and redness.** he affected joint or joints become swollen, tender, warm and red.
- **Limited range of motion.** As gout progresses, you may not be able to move your joints normally.

Gout Diet

- **Risk factors:**

- **Diet.** Eating a diet rich in **red meat,** drinking beverages sweetened with **fruit sugar (fructose**) increase levels of uric acid and Alcohol consumption, especially of beer, also increases the risk of gout.
- **Weight.** If you're overweight, your body produces more uric acid and your kidneys have a more difficult time eliminating uric acid.
- **Certain medications.** Anti-hypertension drugs.
- **Family history of gout.** If other members of your family have had gout, you're more likely to develop the disease.
- **Age and sex.** Gout occurs more often in men.

Gout Diet/ Low Purines

- **Diet Principles:**

- **Organ and glandular meats.** Avoid meats such as liver, kidney, which have high purine levels and contribute to high blood levels of uric acid.
- **Red meat.** Limit serving sizes of beef and lamb.
- **Seafood.** Some types of seafood — such as shellfish, sardines and tuna — are higher in purines than are other types. Moderate portions of fish can be part of a gout diet.
- **High-purine vegetables.** Studies have shown that vegetables high in purines, such as asparagus and spinach, don't increase the risk of gout or recurring gout attacks.

Gout Diet/ Low Purines

- **Vitamin C.** Vitamin C may help lower uric acid levels.
- **Coffee.** Some research suggests that drinking coffee in moderation, especially regular caffeinated coffee, may be associated with a reduced risk of gout.
- **Cherries.** There is some evidence that eating cherries is associated with a reduced risk of gout attacks.