



# Nutrition & Diet Therapy

## Third Stage

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## Lecture seven : The dietary patterns

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## 1-Vegetarians pattern: Rationale and Classification

- ▶ There are many reasons why individuals eliminate animal foods from their diets. The most common reasons are economic concerns, religious guidelines, health considerations, and concern for animal life.
- ▶ When a vegetarian consumes no meat, fowl, or fish as food, the further restrictions on the remaining part of the diet can be classified as follows:

1. **Vegans:** individuals who eat no animal flesh nor any food of animal origin. They are sometimes called strict vegetarians.
2. **Lacto-vegetarians:** individuals who eat plant proteins, and also use milk.
3. **Ovo-vegetarians:** individuals who eat plant proteins, as well as eggs.
4. **Lacto-ovo-vegetarians:** individuals who eat both milk and eggs along with plant proteins.
5. **Fruitarianism:** individuals who eat only fruit.
6. **Semivegetarians:** restrict red meats only—that is, beef, pork, lamb, and game animals. Fish, poultry, dairy foods, eggs, and plants furnish proteins for their diet.

#### BOX 5-5 ■ Names Used To Describe Vegetarian Diets

<i>Name</i>	<i>Foods included</i>	<i>Foods excluded</i>
Lacto-ovovegetarian	Fruits, grains, legumes, nuts Seeds, vegetables, milk, Milk products, eggs	Meat, poultry, seafood
Lacto-vegetarian	Fruits, grains, legumes, nuts, seeds, vegetables, milk, milk Products	Meat, poultry, seafood, eggs
Ovo-vegetarian	Fruits, grains, legumes, nuts seeds, vegetables, eggs	Meat, poultry, seafood, milk and Milk products
Vegan	Fruits, grains, legumes, nuts, Seeds, vegetables	Meat, poultry, seafood eggs, milk products, Honey
Fruitarianism	Raw fruits, nuts, seeds, and berries	All other foods

**Table 4-1 Nutrient Considerations for Vegetarians**

NUTRIENT	PROBLEM	SOLUTION
Protein	Plant protein quality varies; lower bioavailability than animal protein	Consume a variety of plant foods throughout the day, including soy products
Iron	Plant foods contain non-heme iron, which is less bioavailable than the heme iron found in animal foods and which is sensitive to inhibitors such as phytate, calcium, tea, coffee, and fiber	Iron intake recommendations are 1.8 times higher than for omnivores; consume high-iron plant foods with dietary sources of vitamin C, which is an enhancer of iron absorption
Zinc	Plant foods high in phytates bind zinc	Regularly consume foods such as nuts, soy products, zinc-fortified cereals, and soaked and sprouted beans, grains, and seeds
Calcium	Oxalates reduce the absorption of calcium found in spinach, beet greens, and Swiss chard	Regularly consume plant foods that are high in calcium and low in oxalates, such as Chinese cabbage, broccoli, Napa cabbage, collards, kale, okra, and turnip greens in addition to calcium-fortified foods such as orange juice
Vitamin D	Other than endogenously produced vitamin D from sunlight exposure, the primary source of this vitamin is fortified cow's milk	Sun exposure to the face, hands, and forearms for 5 to 15 minutes per day during the summer provides enough sunlight for light-skinned people to produce adequate amounts of vitamin D; dark-skinned people require more sun exposure; otherwise, choose foods or dietary supplements that are fortified with vitamin D, such as soy milk, rice milk, orange juice, and breakfast cereal
Vitamin B <sub>12</sub>	No plant food contains active vitamin B <sub>12</sub>	Choose foods that are fortified with B <sub>12</sub> , such as soy milk, breakfast cereal, nutritional yeast; or use dietary supplements
Omega-3 fatty acid (alpha-linolenic)	Few plant foods are good sources of alpha-linolenic acid	Regularly include sources of alpha-linolenic acid in the diet, such as flaxseeds, walnuts, canola oil, soy products, and breakfast bars fortified with DHA, or take DHA supplements that are derived from microalgae

## 2- Paleo Diet pattern: What is the Paleolithic diet?

- ▶ Obesity, heart disease, and diabetes: These are just a few of the health conditions that proponents of the **Paleolithic diet**, or **caveman diet**, blame on our sedentary lifestyles and modern way of eating, which is loaded with sugar, fat, and processed foods. **Their proposed solution? Cut modern foods from our diet and return to the way our early hunter-gatherer ancestors ate.**
- ▶ you'll need to exercise regularly while following a strict diet comprised only of foods that can be hunted and gathered.
- ▶ In its purest form, the paleo diet allows you to eat only those foods that humans ate when they first roamed the planet about 2.5 million years ago.
- ▶ The paleo diet wasn't created to be a weight loss diet.

## What to Eat ?

- ▶ **Although the paleo diet isn't proven to work, if you want to give this eating plan a try, you'll need to prioritize fueling up on lots of natural foods and natural fats, including these options:**
- 1. Lean cuts of beef, and poultry, preferably grass-fed, organic, or free-range selections
- 2. animals, such as quail, venison, and bison
- 3. Eggs, but no more than six a week, and preferably free-range
- 4. Fish, including shellfish
- 5. Fruit, such as strawberries, cantaloupe, mango, and figs
- 6. Nonstarchy vegetables, such as asparagus, onions, peppers, and pumpkin
- 7. Nuts and seeds, including almonds, cashews, walnuts, and pumpkin seeds
- 8. Olive oil, flaxseed oil, and walnut oil, in moderation

## What to Avoid ?

- ▶ **Keep in mind that some versions of the paleo diet are less strict than others and allow some dairy products or legumes, like peanuts**
- 1. All dairy products, including milk, cheese, yogurt, and butter.
- 2. Cereal grains, such as wheat, rye, rice, and barley.
- 3. Legumes, like beans, peanuts, and peas.
- 4. Starchy vegetables, such as potatoes (and some even say sweet potatoes).
- 5. Sweets, including all forms of candy as well as honey and sugar.
- 6. Artificial sweeteners.
- 7. Sugary soft drinks and fruit juices.
- 8. Processed and cured meats.

### 3- The Mediterranean diet pattern

- ▶ Based on the diets from the southern European countries such as Italy, Greece, and Crete, the Mediterranean diet is not only one of the most delicious, but one of the healthiest as well. People in these countries tend to have good health, slender bodies (no matter how much they eat) and live long and quality life. Of course, there are many factors for that (such as nature and genes), but in general, the food you are consuming plays the largest role in the way how you feel, look, and how healthy you would be.
- ▶ The Mediterranean diet mainly offers whole grains, fresh fruits and vegetables, good fats (fish, olive oil, nuts), fish, and a very small amount of other types of meat.
- ▶ Combined with a proper physical activity, this diet also provides the best results healthy and fit body, good mood, and above all, feeling excellent in your skin. The Mediterranean diet is a lifestyle, a form of self-love. Not only it would help you lose the extra weight, but it would do miracles for your internal organs, and general health.

### What foods are suitable for this diet ?

1. Start by getting a bottle of extra virgin olive oil.
2. Fruits and vegetables that are seasonal such as onions, tomatoes, garlic, cucumber, peas, potatoes, and so on.
3. Beans and legumes are also a good choice for beginners.
4. Fish and seafood are the ideal food for improving your sight, strengthening your hair and nails, and lower the risk of heart failures.
5. You can still begin your Mediterranean diet with feta cheese, Greek yogurt, parmesan, ricotta, or Mozzarella.
6. Nuts and seeds, including almonds, cashews, walnuts, and pumpkin seeds
7. Bread and pasta are great choices for this diet.
8. Eggs are included in this diet
9. Mediterranean cuisines are aromatic and abundant use of fresh herbs such as parsley, rosemary, black pepper, cumin, cinnamon sticks, basil, bay leaves, dill, garlic, and onion.

## **Foods that are not Mediterranean Diet**

1. Red meat and processed meats (Following this diet means to limit the consumption of such meats to once per week).
2. Avoid using hydrogenated oils such as palm kernel and palm oil.
3. The next ingredient that you need to avoid is sugar.
4. White flour and white rice are not the best options for the Mediterranean diet. Instead, go for bread made of whole grains flour, brown rice, and pasta made of whole wheat.
5. Butter makes any food super tasty, but you will have to limit its consumption. Olive oil replaces butter in your cooking. Butter or animal fats are unhealthy options.
6. The alcoholic drinks contain heavy amounts of sugar so its are not good options.

## **4- Atkins diet pattern**

- ▶ The Atkins Diet is a popular low-carbohydrate eating plan developed in the 1970s by cardiologist Robert C. Atkins. The Atkins Diet restricts carbs (carbohydrates) and controlling insulin levels while emphasizing protein and fats.
- ▶ The Atkins diet is a low-carb diet, usually recommended for weight loss. Proponents of this diet claim that you can lose weight while eating as much protein and fat as you want, as long as you avoid foods high in carbs. Despite being high in fat, it does not raise “bad” LDL cholesterol on average
- ▶ The diet was originally considered unhealthy and demonized by the mainstream health authorities, mostly due to its high saturated fat content. However, new studies suggest that saturated fat is harmless. Since then, the diet has been studied thoroughly and shown to lead to more weight loss and greater improvements in blood sugar, “good” HDL cholesterol, triglycerides and other health markers than low-fat diets.

## The Atkins Diet Is a four Phase Plan

- ▶ **Phase 1 (induction):** Under 20 grams of carbs per day for 2 weeks. Eat high-fat, high-protein, with low-carb vegetables like leafy greens. This kick-starts the weight loss.
- ▶ **Phase 2 (balancing):** People gradually introduce nutrient-dense and fiber-rich foods as additional sources of carbs. These foods include nuts, seeds, low carb vegetables, and small amounts of berries. People can also add soft cheeses in this phase.
- ▶ **Phase 3 (Premaintenance):** Dieters increase their carbs intake by 10 g each week. Weight loss will now be slow. They can start introducing legumes, such as lentils and beans, fruit, starchy vegetables, and whole grains to the diet.
- ▶ **Phase 4 (Lifetime maintenance):** Here you can eat as many healthy carbs as your body can tolerate without regaining weight.

## 5- The keto diet pattern and ketosis

- ▶ Ketogenic (keto) diets have been used since the 1920s to very effectively control seizures in refractory childhood epilepsy. This version of the ketogenic diet uses a four-to-one ratio of fat to combined protein and carbohydrate.
- ▶ Unfortunately, the general public has not been properly exposed to the truth about ketosis because of some deliberate scaremongering about the dietary changes that are required to induce it. Just as cholesterol is not the culprit in heart disease, ketones are not some kind of toxic substance in your body that you need to avoid at all costs.
- ▶ Ketosis is a metabolic state that happens when you consume a very low-carb, moderate-protein, high-fat diet that causes your body to switch from using glucose as its primary source of fuel to running on ketones. Ketones themselves are produced when the body burns fat, and they're primarily used as an alternative fuel source when glucose isn't available (In other words, your body changes from a sugar-burner to a fat-burner. Depending on your current diet and lifestyle choices).

## Health benefits that come from being in ketosis

- ❖ Natural hunger and appetite control
- ❖ Effortless weight loss and maintenance
- ❖ Mental clarity
- ❖ Sounder, more restful sleep
- ❖ Normalized metabolic function
- ❖ Stabilized blood sugar and restored insulin sensitivity
- ❖ Lower inflammation levels
- ❖ Feelings of happiness and general well-being
- ❖ Lowered blood pressure
- ❖ Increased HDL (good) cholesterol
- ❖ Reduced triglycerides
- ❖ Lowered or eliminated small LDL particles (bad cholesterol)
- ❖ Ability to go twelve to twenty-four hours between meals
- ❖ Use of stored body fat as a fuel source
- ❖ Endless energy
- ❖ Eliminated heartburn
- ❖ Better fertility
- ❖ Prevention of traumatic brain injury
- ❖ Improved immune system
- ❖ Slowed aging due to reduction in free radical production
- ❖ Improvements in blood chemistry
- ❖ Optimized cognitive function and improved memory
- ❖ Reduced acne breakouts and other skin conditions
- ❖ Improvements in metabolic health markers
- ❖ Faster and better recovery from exercise
- ❖ Decreased anxiety and mood swings

## The side effects of keto diet

- Nausea
- Fatigue
- Dizziness
- Weakness
- Headache



## 6- Fasting pattern

- Fasting is known to cleanse the body and soul – both physically and spiritually, and is a technique that human beings have been using for over a thousand years. Almost all the religions and cultures in the world encourage and endorse fasting in one form or the other.
- Fasting led certain medical specialists to explore the idea of a ketogenic diet by mimicking the concept of fasting i.e. consume zero calories. Even today, people believe that fasting is the best self-healing medicine for the human body. Fasting comes with a series of benefits and most of them are due to the presence of ketones in the body.
- Fasting can put your body into ketosis and people who practiced fasting were not clearly aware of this crucial factor (ketosis)! The ketosis state in your body is the best natural anticonvulsant drug one can ever have.
- When the scientists identified a way to measure the blood ketone levels, they established a connection between the keto diet and fasting. By mid-1900s, they realized that fasting led to ketone production in the body.



### 5:2

You eat normally (but healthily) for five days a week and fast on two days a week, eating around 500 or 600 calories. How these calories should be split (for example, into two or three meals), and whether you should fast for two consecutive days or separate them out, can vary.

## Which fasting diet is best?



### Alternate days

This involves one day of eating normally followed by one day of fasting, repeated over and over. Plans vary, but some recommend having around 500 calories on fasting days.



### Whole day

This is a 24-hour fast. You eat just one meal a day - for example, dinner. One popular version is the Eat-Stop-Eat diet, which recommends whole-day fasting once or twice a week.



### Overnight

As the name implies, this means you avoid eating for 12 hours overnight and do most of your fasting while you're asleep.



### Time restricted

You restrict eating to a set period of time each day and then fast for the remainder of the day. In the 16:8 diet, for example, you limit eating to an eight-hour window and fast for 16 hours, once or twice a week.