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***The Health Benefits of the Mediterranean Diet***

***Kathryn Cleek***

***GH 401***

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**Abstract****Introduction**

This thesis is over the health benefits of the Mediterranean diet, what causes these increase in health benefits. In the introduction of this paper I discuss what the Mediterranean diet is, the history of the Mediterranean diet, who first demonstrated the diet, the physical activity differences in America and Europe, the portion size differences and the Ten Commandments of the diet. Each component of diet is important for understand how the diet works when comparing it to the health of those who demonstrate the diet.

**Main Body**

The main body is composed of what I used to find my unknowns in the thesis. I use the information I was able to find to answer my questions on the through my field research study, unknown and puzzling concerns, the differences between the Mediterranean diet and other diets, research, clinical trials and studies that have been completed, and the main Components and their chief health benefits. The findings were remarkable and was used to form my conclusion.

**Conclusions**

My findings concluded that the reason the Mediterranean diet is so beneficial is because of the preparation, the fresh food and ingredients, the controlled portion sizes, the increase in physical active and surrounding each other with family. It is a lifestyle, not a diet, that makes the biggest change on people health. This diet should be implemented by more individuals, especially those who have heart disease or a family history of heart disease.

### **What is Mediterranean diet?**

The Mediterranean diet is based off of the food that individual living along the Mediterranean Sea would traditionally consume. The Mediterranean diet emphasized on a few components to produce a healthy mental and physical body. To start, the diet is composed of 7 major components. Individuals eat primarily plant-base foods, such as fruits, vegetables, well as whole grains, fresh sea food, legumes and nuts. On average individuals who demonstrate the Mediterranean diet eat five to eight servings a day of antioxidant-rich fruits and vegetables. Commonly grown legumes in the Mediterranean include chickpeas, lentils, and peas. Some commonly grown nuts and grains include almonds, hazelnuts, pine nuts, walnuts, barley, corn, rice and wheat. (Raddetto, 2012) The Mediterranean diet also replaces butter with healthy fats such as olive oil. (Hu, 2003) Instead of using salt and pepper the diet suggest the use herbs and spices. Red meat is limitation to no more than one to two times a month. Instead of red meat, individuals consume fresh fatty fish, rich in omega-3, at least three to four times a week. Some popular fatty fish include salmon, lobster, shrimp, trout, tuna and anchovies. (Raddetto, 2012) It is also recommended to have one or two small glasses of wine a day, preferably red and at the main meals. (Nestle, 1995) It is stated that it is also good to drink purple grape juice at breakfast as most heart attacks occur in the morning. (Ozner, 2014) The Mediterranean diet also recognizes the importance of being physically active, active spiritually at peace and enjoying meals with family and friends.

### **History of the Mediterranean diet**

The origin of the Mediterranean cuisine dates back to ancient Egypt, a civilization that developed between 3000 BC and the fourth century A.D. (Nestle, 1995) The Egyptians culture

was the first to promote an intensive and systematic cultivation of cereals, mainly wheat but also millet, barley and rye. In addition to bread, another of the great contributions to world cuisine was beer, which was practically the "national" drink. Along with legumes, bread and onions this was the staple food of the Egyptians. (Nestle, 1995)

Greeks and Romans interpreted the world and natural phenomena through mythology, while at the same time asking the supernatural for protection. (Soza, 2009) Greek and Roman Gods were also often associated with food and food sources. For example, Demeter was one of the main Greek Goddess' (Ceres for the Romans). She was the Goddess of Agriculture, particularly grain. Artemis (Diana, in Roman mythology) was the Goddess of hunting and the woods. She was depicted armed with bows and arrows while accompanied by a deer. (Purcell, 2003) Even the wine that is so much appreciated in both cultures was identified with the God Dionysus in Greece and Bacchus in Rome. Dionysus, the God of wine, was a God with two personalities: on some occasions he was represented as a farmer and a moderate drinker and on others as a libertine and wild lover of parties and dancing. Dionysus is also known as the god of fertility as he was the only God to be born twice. (Peters, 2009)

The Greeks were also responsible for the delicacy and sophistication of culinary art achieved through the use of seasoning and herbs. The Greeks invented the concept of dieting. The "diaita" or way of life, sought a balance between the body and the spirit. (Nestle, 1995) Although the Greeks would follow medical advice, each person decided which foods and exercises were the most beneficial through the observation of their body. For this reason, they identified the Gods with natural phenomena and everyday activities. (Tang, 2008)

The discovery of America represented the integration of new foods in the Mediterranean cuisine. Among the products that stand out the most were red peppers and beans. Beans became a fundamental legume in the Mediterranean from the nineteenth century onwards. Tomatoes also deserve a special mention - together with potatoes, the tomato is one of the fundamental ingredients in Italian and Spanish dishes.

### **First demonstrates by those who live along the Mediterranean**

From the point of view of geography and culture, we can distinguish three main areas of the Mediterranean Sea. The western Mediterranean area goes from Portugal to Italy. In these countries there are differences between the regions bordering the Mediterranean and the inland, which is more influenced by central European cuisine. (Ferro-Luzzi, 1995) The eastern Mediterranean area is a mixture of countries with different cultures. Slovenia, Greece and the area of the Middle East (Israel, Syria and Lebanon) are just some of them. The southern Mediterranean area includes countries like Egypt, Libya, Tunisia, Algeria and Morocco which have a common denominator in the religion of Islam. (Hu, 2003) Each area has the same diet however different in some areas. For example, Italians use mozzarella cheese as part of many meals while the Greeks use more feta cheese. Each region has something unique yet still follows the components of the diet and lifestyle.

### **Physical Activity**

Individuals along the Mediterranean are also more physically active than people in America. One reason being is that there is not a lot of public transportation or vehicles to get from A to B. People walk everywhere they go therefore the obesity rate is much lower in Europe

when compared to America. Roughly one in every three individuals in America are obese (36%) while in Europe one in every six individuals are obese (16%). (HarvardUniversity, 2015) Europeans get roughly 25.300 minutes of physical activity a day while Americans get 18.110 minutes a day. (EuropactiveAdministators, 2015) On average Americans are recommended to walk 5 miles a day whereas Europeans walk nearly 10.2 miles a day. (EuropactiveAdministators, 2015) These statistics alone show the biggest difference between Americans and Europeans.

### **Portion Sizes**

Portion sizes in the Mediterranean are different than they are in the United States. This is one of the contributing factors of why individuals in the Mediterranean tend to manage their weight more effectively. The major problem with portion sizes is that restaurants serve larger and larger serving sizes all the time. The fast food industry is one of the reasons why our obesity rate continues to increase as their portion sizes continue to increase and the meals become cheaper. This can be seen as the “Supersize Me” promotion at McDonalds, the “\$5 foot long” at Subway, or the all you can eat buffets. These restaurants and fast food industries, do not follow the recommended portion sides given for Americans.

The recommended portion size for Americans is actually very similar to the Mediterranean diet. For example, the serving size of meat as a side dish is 2 to 3 ounces and half a cup of grains or pasta. However, Americans eat closer to 8 ounces of meat and two cups of grains or pasta at a given meal. This is two to three times the amount needed. (Raddetto, 2012) An increase in portion size causes in increase in calorie intake which causes an increase in weight which causes an increased risk of health problems. It is a cycle that can cause many health problems throughout life.

## **The Ten Commandments**

There are rules also known as “Ten Commandments” that one must follow when partaking in the Mediterranean diet. The first commandment is eating primarily plant-based foods, such as fruits and vegetables, legumes and nuts. The second commandment is to replace butter with healthy fats such as olive oil. This can be an adjustment for many however the benefits will be shown later in this thesis. Another commandment is the use of herbs and spices instead of salt and pepper. Herbs such as thyme, basil, oregano, and dill. One of the most difficult commandment for Americans is not consume red meat more than one to two times a month. It is also recommended to consume fresh fish, especially oily fish at least three to four times a week. The sixth commandment is a recommendation to drink one or two small glasses of wine a day, preferably red and at the main meals. The benefits of red wine can increase one's health tremendously, especially one's heart health. One of the key commandments is the importance of being physically active and enjoying meals with family and friends. Many individuals do not think of this as part of a “diet” however it can have an increase in mental health stability and overall wellbeing. Another struggle many Americans would also struggle with is only consuming sweets or sweet drinks for special occasions. As for calcium, it is commanded to eat yogurt everyday (about 200g) and cheese in moderation (about 30 to 40 grams per day) 10. The last commandment is to include wholegrain breads and cereals with meals (aim for 3-4 slices of bread per day). (Nestle, 1995) Each of these components plays a role in overall health and wellbeing for individuals who partake in the diet.



## **Field Research**

In the summer of 2014 I went to Europe for 3 weeks to partake in field research of the Mediterranean diet. Throughout my field research in Europe, I observe many different styles in preparation of food and wine as well as the daily life of the people who lived in these countries. As part of my research I visited local wineries to talk with them about the preparation of the wine as well as how it plays a part of their diet. I also spent time in the city at local food markets and restaurants. I also talked with many locals about food preparation and their lifestyle to compare it to Americans. I spent my research in Italy, Greece and a few days in Turkey.

### ***Italy***

Food: Surprising there were no fast food restaurants. Everything was a sit down meals to be enjoyed with friends and family. Each evening we enjoyed pasta, bread with olive oils, no meat other than fish and wine. The portion sizes were much smaller than what we are used to.

Something I took complete advantage of was having Gelato each evening which is the main dessert. There were no grocery stores to be found and many people were confused when I asked. Many individuals stated that they buy their food at local meat market or fruit stands which could be found on each corner.

Lifestyle: People seemed overall very active. The lay out of the city prevented many to use transportation therefore everyone walks everywhere. There were many parks (even in city) where children would play. There were also many children that would play soccer in the side streets of the city. I saw very few people that were overweight in bigger cities like Rome. In

Southern Region of Italy like Pompaii there are more individuals over weight. (Possibly because of more area makes easier to drive.)

### *Greece*

Food: There was also no fast food restaurants. Like Italy, everyone would sit down for meals with friends and family. We ate a lot of pork, lamb, tuna, salads with a lot of vegetables, gryos, and would add lemon for taste. There were a couple of grocery stores however they were much smaller and most people would most likely buy food at meat market or fruit stands than a store. At a local winery that I visited, the wine was harvested by hand picking the wine and no machinery is used in the process.

Lifestyle: People were not as active in Greece as in Italy but were active more as in lifestyle and work. Instead of fitness and exercise it was more about working in the fields and transporting cattle (donkeys) up and down the mountains through little walk ways of the cities. It was hard labor rather than conventional exercises.

### *Turkey*

I was only in Turkey for one day but the locals explained the Turkey was an up and coming city therefore it was more tourist driven. There was one city where they actually had a McDonalds. This was the only one I found in Europe while I was there. From observation there were few people over weight compared to the United States. The food was fairly similar to Greece but was a little spicier and more fish was incorporated in each meal.

**Unknown, or puzzling, or in conflict concerns**

The health benefits of demonstrating the Mediterranean Diet shows a reduced risk of Alzheimer's disease, Arthritis, Asthma, Cancer, Cardiovascular Disease, Chronic obstructive lung disease, Depression, High blood pressure, High cholesterol, Inflammatory bowel disease and Metabolic syndrome (Ozner, 2014, p. 5) The purpose of this thesis is to find the unknown, what in the diet brings together all of these wonderful health benefits.

Although the Mediterranean diet shows many health benefits, the reason for these health benefits are unknown, thus I propose to do an analysis of what food, health choices and lifestyles show a decrease in these disease and compare the Mediterranean diet to other diets like low-fat diets, Adkins, Western diet or American diets.

The reason I choose this topic is to have a better understanding of how does the Mediterranean diet differ from other popular diets like the American "Western" diet, Atkins, or low-fat diets. We have all heard of the fad diets to help individuals lose weight and live a healthier life but I am not sure what makes the Mediterranean diet any better.

I am also curious of what does research has been done to state that this method is the "best"? From the research I have found, the Mediterranean diet is one of the oldest diets and is one that has not changed. If this is the best than why is there not more people demonstrating the diet and what are the drawbacks to the diet.

What is in the food that causes the reduced risk of everything? If there is so many benefits of the Mediterranean diet, than what component of food does this diet have that helps our overall health? How can this diet help promote health and prevent disease? What makes the diet beneficial?

**How I will investigate the unknowns**

I will collect by my data by studying what has been previously been published on the effects of the Mediterranean diet, research on the different diseases like Alzheimer's, metabolic syndrome, heart disease, and obesity. I will also collect data from my previous trip to the Mediterranean Sea with an emphasis on Italy and Greece that occurred in the summer of 2014. From here, I will draw my conclusion of what makes the Mediterranean diet different.

Some of the resource I plan to use to gather my research is the American Heart Association. They fund tons of research on heart disease and strokes. The Alzheimer's Association is another organization I plan to use to collect my information. They provide the most up to date information on the latest discovery. The Journal of Clinical Nutrition is a resource that will help me find information on different nutritional components of the Mediterranean diet and what makes these so important for the health benefits. These resources will help me collect research and data to help the advancement of understanding why the Mediterranean diet is so beneficial to our health.

As there is limited research for the over the health benefits on the Mediterrean diet, my research will help advancement of understanding of why the Mediterranean diet is so beneficial to health.

The Mediterranean Diet is known for a wide variety of fresh whole non-processed foods, frequently enjoyed with a glass of wine in a relaxed setting with family and friends. It remains unchanged and stays to its tradition. What research has shown in recent years, is the health benefits of those who demonstrate the Mediterranean diet. The health benefits of the Mediterranean diet are quite astonishing. Research has shown that those who demonstrate the traditional Mediterranean diet have a lower risk of heart disease and cancer, as well as a reduced

incidence of Parkinson's and Alzheimer's diseases. (Scarmeas, 2006) Another interesting note is that those same individuals have an increase in life expectancy than any other diet. (Nestle, 1995) In fact in 1960 Crete, Greece and Southern Italy Circa had the lowest rate of chronic diseases among their population in the world and the adult life expectancy was among the highest even though medical services were limited. (Nestle, 1995) This is the same year that they created the first food pyramid using the most current research to represent a healthy, traditional Mediterranean diet. The Dietary Guidelines for American recommends the Mediterranean diet as an eating plan that can help promote health and prevent disease. (Scarmeas, 2006) Those who demonstrate the Mediterranean diet also show a decreased risk of Alzheimer's disease, Arthritis, Asthma, Cancer, Cardiovascular Disease, Chronic obstructive lung disease, Depression, High blood pressure, High cholesterol, Inflammatory bowel disease and Metabolic syndrome. (Ozner, 2014, p. 5)

### **The difference between the Mediterranean diet and other diets**

There are many theories of why the Mediterranean diet has a lower risk of death from heart disease compared an American (Western) diet. Scientist have linked the intake of fats (saturated and trans) to the development of heart disease and other diseases including cancer. (Ozner, 2014, p. 11) People of the Mediterranean consume healthier types of fats such as monounsaturated fats and polyunsaturated omega-3 fatty acids and less of the omega-6 polyunsaturated and saturated fats other cultures tend to overload on. (Raddetto, 2012) This one of the biggest differences in the Mediterranean diet and American (Western) Diets. The American diet contain an excessive amount of saturated fats and trans fats in their daily foods.

The Mediterranean diet also is shown to decrease inflammation and current research has demonstrated the pivotal role that inflammation plays in the development and progression of

heart disease, cancer, diabetes and an increasing list of other diseases. The American diet has high levels of saturated fats, trans fats and omega-6 fats, which promotes inflammation and increases the incidence of heart disease and multitudes of the other diseases initiated and aggravated by the state of chronic inflammation. (Ozner, 2014, p. 11)

As stated, the Mediterranean diet is not a fad diet. It is a lifestyle that is filled with many health benefits for the body and soul. When people hear the word “diet” many people believe that it means weight loss. While weight loss is a side effect of the Mediterranean diet, it differs from other popular diets like low-fat diets (Ornish and Pritikin), AHA , American Heart Association, diet and low-carbohydrates diet (Atkins). Each diet has its perks and downfalls however, many people will struggle to find a drawback to the Mediterranean diet.

Low fat diets like Ornish and Pritikin, can be difficult for Americans to follow. These diets include low-fat, high-carbohydrates and are mainly vegetarian dishes. They are usually not palatable for most individuals. Also, the build-up of carbohydrates can cause an increase in weight if not properly exercised. On February 25, 2013, Spain reported a study comparing a Mediterranean diet to a low-fat diet in the New England Journal of Medicine. The study was stopped after 4.8 years due to a highly significant 30 percent reduction in major cardiovascular events such as heart attack, stroke and death in those following the Mediterranean diet. (Estruch, 2013)

The AHA (American Heart Association) diet can lead to decreased good (HDL) cholesterol, and heart disease may progress regardless. The AHA diet contains less monounsaturated fats and omega-3 fat than the Mediterranean diet and is associated with a higher risk of heart attack and death. The Lyon Heart Study demonstrated a 73% in

cardiovascular endpoints (heart attack or death) in patients following the Mediterranean diet rather than an AHA step 1 diet. (Ozner, 2014, p. 19)

The once most popular diet in America was the low-carbohydrates diet also known as Atkins. Although many people have lost weight with this diet, this process of water loss can result in fluid and electrolyte changes that may lead to serious cardiac arrhythmias (heart rhythm disturbances) and kidney malfunction. (Ozner, 2014, p. 20) This diet is no longer recommended by doctors as many have reported side effects and complications when demonstrating this diet. Some of the potential risk include cancer, elevated cholesterol and kidney stones, optic neuropathy, coronary heart disease and dehydration. (Ozner, 2014, p. 20)

### **Research of clinical trials and studies**

There has been many studies and clinical trials that have taken place to study the beneficial impact the Mediterranean diet has on cardiovascular health. As reported in the New York Times on March 2, 2013, by medical professionals “This is a watershed moment in the field of nutrition. For the first time, a diet has been shown to have an effect as powerful as drugs in preventing what really matters to patients-heart attacks, strokes and death from cardiovascular disease.” (Kolata, 2013)

The Seven Countries Study was a twenty-year study by Dr. Ancel Keys. It started in 1958, with 13,000 men after exploratory research on the relationship between dietary pattern and the prevalence of coronary heart disease in the United States, Greece, Italy, Yugoslavia, Netherlands, Japan, and Finland. (Harvard University, 2015) The men who lived in the Mediterranean region had the lowest incidence of heart disease and the longer life expectancy. (Toshima, 2011) The Greek men had a 90 percent lower likelihood of premature death from heart attack compared to American men. (Ozner, 2014, p. 10)

The Lyon Diet Heart Study is a study that compared a Mediterranean diet to a control diet resembling the American Heart Association Step 1 diet in heart attack survivors and found that, compared to the Mediterranean diet afforded significantly better protection against recurrent heart attacks and death. (Ozner, 2014, p. 10) The Mediterranean diet was associated with 70% decreased risk of death and 73% decreased risk of recurrent cardiac events. (Kris-Etherton, Eckel, & Howard, Lyon Diet Heart Study-Benefits of a Mediterranean-Style, National Cholesterol Education Program/American Heart Association Step I Dietary Pattern on Cardiovascular Disease, 2001)

The DART study included 2,000 men who suffered from a heart attack. These 2,000 men were put on a diet that consisted on fatty fish such as salmon and tuna which are rich in omega-3 fatty acids. This hypothesis was to determine if fish rich in omega-3 would decrease the risk of coronary heart disease. (Kris-Etherton, Harris, & Appel L., 2002) The study found that those who ate fatty fish twice a week (around 300 grams per week) reduced the risk of coronary heart disease death by 32% and overall death by 29%. (Ozner, 2014, p. 10)

The Singh Indo-Mediterranean Diet Heart study was another study that made a huge impact on the prevention of cardiovascular health. This study placed 499 patients with risk factors for coronary heart disease on an Indo-Mediterranean diet rich in fruits, vegetables, whole grains, walnuts, and almonds. (Ozner, 2014, p. 10) Patients who demonstrates these changes in their diet showed a decrease in serum cholesterol and a significant reduction in heart attack and sudden cardiac death. (Singh, 2002) These patient also showed a decrease in cardiovascular events than those who had no diet change. (Singh, 2002)

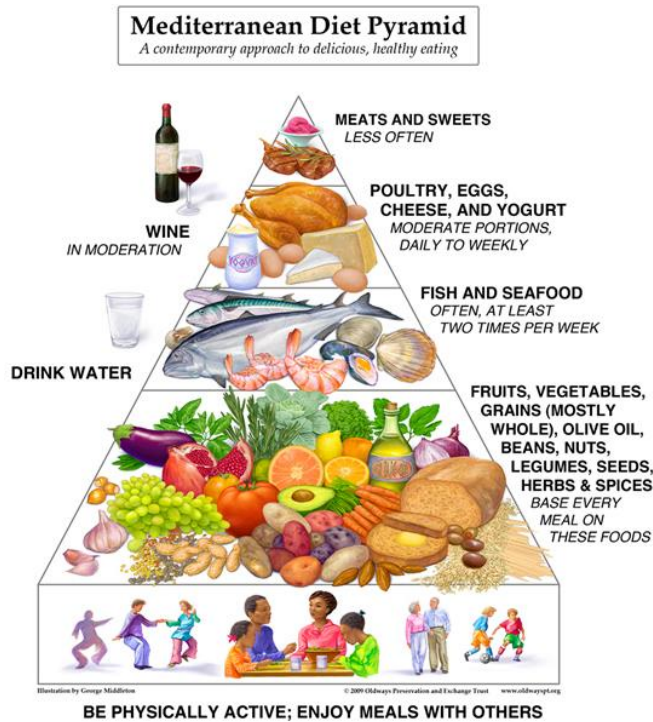
Outside the cardiovascular benefits, the Mediterranean diet also has shown a reduction in risk of Alzheimer's disease. Alzheimer's disease is the 6<sup>th</sup> leading cause of death in the United



States. (Alzheimer's Association, 2015) An estimated 5.3 million Americans of all ages have Alzheimer's disease in 2015. (Alzheimer's Association, 2015) A recent study by Dr. Nikolaos Scarmeas and colleagues from Columbia University Medical Center in New York demonstrated that a Mediterranean diet reduces the risk of developing Alzheimer's by 68%. (Scarmeas, 2006) This same study showed that patients with Alzheimer's disease who follow the Mediterranean diet had reduce in mortality rate. (Scarmeas, 2006)

The Mediterranean diet also shows an improvement in treating patients with metabolic syndrome. (Tortosa, 2007) Metabolic syndrome includes obesity, elevated blood sugar, elevated blood pressure, abnormal cholesterol profile, and markers of vascular inflammatory. (Ozner, 2014, p. 10) In a recent study, Dr. Katherine Esposito and her colleagues evaluated the effects on the Mediterranean diets on patients with metabolic syndrome. The results showed that all components of the metabolic syndrome improved with the use of the Mediterranean diet. (Esposito, 2011)

### **Main Components and their chief health benefits**



The Mediterranean diet has 7 main components which determine the health benefit each person deserves. These 7 components can be seen on the food pyramid below. These include whole grains, fresh fruits and vegetables, nuts, beans (legumes), fish, olive oil and red wine. Each has a special contribution to the diet as a whole and makes it what it is today.

Whole (non-refined) grains are one of the largest integral parts of the Mediterranean diet. Whole grains have been shown to decrease the risk of heart diseases, diabetes, and cancer. (Raddetto, 2012) The anatomy of the kernel has 3 main points. The outer layer which contains the bran (fiber), a middle layer which holds the complex carbohydrates and protein, and then the inner layer which has the vitamins, minerals and proteins. Refining grains often destroys the inner and outer layer of the grain. This results in the grains lacking fiber, disease-fighting vitamins and phytochemicals. (Ozner, 2014, p. 11)

Fresh fruits and vegetables are an integral part of the Mediterranean diet. Fruits and vegetables contain an abundance of vitamins, minerals, fiber, and complex carbohydrates that

lower the risk of heart disease and cancer. (Ozner, 2014, p. 12) Individuals who demonstrate the Mediterranean diet eat five to eight servings of fruits and vegetables a day. (Hu, 2003) It is also recommended to eat a wide variety of colors in order to get all the nutritional benefits that fruits and vegetables can provide. Green color foods like broccoli, spinach and green peppers have shown to have a lower risk of some cancers, healthy visions and strong bones. Red foods such as strawberries, bell peppers, and pink watermelon have a lower risk of heart disease and some cancers and improved memory function. (Raddetto, 2012)

Nuts such as almonds and walnuts are rich in monounsaturated fat and omega-3 fatty acids, as well as food sources of protein, fiber and vitamins. Research has shown that regular nut consumption leads to lower risk of coronary heart disease and a significant reduction in risk of heart attack. (Ozner, 2014) According to Mayo Clinic, eat nuts can lower the low-density lipoprotein (LDL or “bad”) cholesterol level in their blood. (MayoClinicStaff, 2015)

Beans (Legumes) are a rich source of soluble and insoluble fiber, which helps curb appetite and reduce cholesterol. Beans are an excellent source of fiber, protein and B vitamins, phytochemicals. Regular bean consumption lowers the risk of great disease, cancer, and diabetes. (Raddetto, 2012)

Fish and seafood occupy their own section, since they are important sources of protein. Fish such as tuna, herring, salmon, and sardines are rich in heart-healthy omega-3 fatty acids. Omega-3 fatty acids have a favorable impact on cholesterol and triglyceride levels and reduce the risk of heart attack. (Ozner, 2014) At the minimum food should be consumed least twice a week. (Baer-Sinnott, 2012) Omega-3 help to reduce inflammation and a decrease the risk of sudden death due to fatal cardiac arrhythmias. (Ozner, 2014)

Olive Oil represent the core of the diet. Base every meal on fruits, vegetables, whole grains, legumes, and herbs and spices. Olive oil, the main source of dietary fat, is used for almost all cooking and baking, and for dressing salads and vegetables. Olive oil a monounsaturated fat which is are of fat that is beneficial for heart health. (Ozner, 2014) The regular use of olive oil instead of butter or margarine is associated with a reduced risk of heart disease, cancer, diabetes and inflammatory disorders like asthma and arthritis. (Ozner, 2014) A study of 26,000 Greek people published in the *British Journal of Cancer* showed that using more olive oil cut cancer risk by 9 percent. (Raddetto, 2012)

Wine can be consumed regularly but moderately: up to one glass per day for women, two for men. Two of the main components of red wine included polyphenols and resveratrol which helps promote heart health. (Ozner, 2014) Many studies have been published in science journals about how drinking alcohol may be associated with reduced mortality due to heart disease in some populations. The linkage reported in many of these studies may be due to other lifestyle factors rather than alcohol. Such factors may include increased physical activity, and a diet high in fruits and vegetables and lower in saturated fats. (AHA, 2015)

As part of the Mediterranean diet, daily physical activity is required. The Mediterranean diet Daily Physical Activity, which is important for overall good health, includes strenuous exercise such as running and aerobics, more leisurely activities such as walking and house-or-yard work, and simple changes, such as taking the stairs instead of the elevator. Add physical activity to each day.

One of the last parts of the Mediterranean diet is cooking and eating meals with others. Meals prepared and eaten at home are usually more nutritious and healthy. They contain more fruits, vegetables, and dairy products along with additional nutrients such as fiber, calcium,

vitamins A and C, and folate. Home cooked meals are usually not fried or highly salted, plus soda and sweetened beverage consumption is usually lower at the dinner table. (Hand, 2013)

The Mediterranean diet is based on those who lived along the Mediterranean Sea thousands of years ago. The food has not changed much through the years and it is still a traditional diet in these countries. This diet is not a fad but a lifestyle that one lives. Eating fresh and local is part of the culture as many individuals do not have large refrigerators as Americans.

This thesis was to discuss why the Mediterranean diet was so successful to preventing many health condition and disease. The research showed that the Mediterranean diet reduced the risk of allergies, Alzheimer's disease, Arthritis, Asthma, Cancer, Cardiovascular Disease, Chronic obstructive lung disease, Depression, High blood pressure, High cholesterol, Inflammatory bowel disease and Metabolic syndrome. The underlining question was what components of the Mediterranean diet made such a difference in those who demonstrated the diet. The research showed that each component of the diet, including food, nutrition, physical activity and social out brining is how the Mediterranean diet is so successful.

Food is just one component of the diet. The food is composed of a high intake of fruit and vegetables, whole (unrefined) grains, fresh fish rich in omega-3, olive oil, red wine (or grape juice), and nuts which are all contributing factors of the success. Each factor has a special ingredients that makes a difference in the health of the people who demonstrate the diet. Fruits and vegetables are filled with antioxidants, phytochemical, fibers, minerals and vitamins that help build immune systems, to promote heart health and prevent certain cancers. Whole (unrefined) grains are filled with carbohydrates, protein and fiber which helps curve hunger, decrease the risk of heart diseases, diabetes, and cancer. Seafood and fish are rich in omega-3 are used to reduce inflammation and a decrease the risk of sudden death due to fatal cardiac

arrhythmias. Red wine is also a preventive of heart diseases as it is rich with antioxidants which lowers bad cholesterol, increases good cholesterol and reducing blood clot formation. The regular use of olive oil instead of butter or margarine is associated with a reduced risk of heart disease, cancer, diabetes and inflammatory disorders like asthma and arthritis. (Ozner, 2014) Nuts are rich in monounsaturated fat, omega-3 fatty acids, protein, fiber and vitamin which as stated earlier, are ingredients to decreasing the risk of heart problems.

One's needs to surround themselves with friends and family to have a more mentally stable lifestyle. As stressful as family and friends can be, research has shown that those who have loved ones around live a overall happier and healthy lives. Even in the Greeks believed that there is an important to family and friends should come together to enjoy meals together. They believed the "diaita" or way of life, sought a balance between the body and the spirit in ancient times.

From the Egyptians, around the Mediterranean Sea and throughout the world, as the Mediterranean diet continues to grow and expand there is hope for a healthier world. As stated before, this is not a weight loss program, fad diet or a trend, this is a lifestyle that has great benefits overall. It is said to be an easy way to make adjustments in one's home that can affect the whole family and promote great health and prevent serious diseases. (Tang, 2008)

This diet is truly about the lifestyle one lives by and the food they put into their bodies. It is about the preparation (no processed food and fresh foods) that makes the biggest difference in the diet when compared to other. The portion sizes are also much smaller than here in America. Having loved one around also helps with overall mental health.. This are all key components, the preparation, the portion sizes, the physical active and surrounding each other with family is makes this diet so beneficial. It is a lifestyle, not a diet, that makes the biggest change on people

health. This diet should be implemented to more individuals for overall health but especially those who have a family history of heart disease.

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