

"Live Long and Prosper"

--Mr. Spock

There are five 'blue zones' in the world where people live the longest and healthiest of lives. They are: Sardinia (but just a particular region of the Italian island), Okinawa Japan, Ikaria (a Greek island), Costa Rica's Nicoya Peninsula, and Loma Linda, CA.

Research has been done on these locations to find out why these people can live to be 90 to 100 years old and stay in good health for most of those years. Factors that contribute to such healthy longevity include:

- ✤ a healthy diet
- daily exercise (e.g. gardening and walking)
- a lower stress level in life (e.g. having periods of calm, mid-day rests, and having a sense of purpose in life).

Many people say they 'eat a healthy diet' and yet the U.S. is rife with diseases killing us at an early age, such as heart attacks, strokes, high blood pressure, diabetes, and cancer. What's 'a healthy diet' mean in these blue zones? They all revolve around plants (fruit, veggies, whole grains, nuts & beans), and meat is reserved mostly for special occasions – and half of Loma Linda's population are 7^{th} Day Adventists and do not eat it at all. Beyond low meat, there is the avoidance of sugar, fat, and processed foods with toxic chemicals.

Component	Included foods
Vegetable food groups, by quintile	
1. Vegetables	Carrot, Swiss chard, cauliflower, lettuce, tomatoes, green beans, eggplant, peppers, asparagus, spinach other fresh vegetables
2. Fruit	Citrus, banana, apple, pear, strawberry, peach, cherry, fig, melon, watermelon, grapes, kiwi, canned fru
3. Legumes	Lentils, chickpeas, beans, peas
4. Cereals	White bread, whole-grain bread, cold breakfast cereal, rice, pasta
5. Potatoes	Potato chips, French fries, boiled potatoes
6. Nuts	Almonds, peanuts, hazelnuts, pistachios, pine nuts, walnuts
7. Olive oil	Common (refined) olive oil, extra-virgin olive oil, olive pomace oil
Animal food groups, by reverse quintile	
8. Meats/meat products	Beef, pork, lamb, rabbit, liver, chicken, turkey, cooked ham, Parma ham, mortadella, salami, foie gras spicy pork sausage, bacon, cured meats, hamburger, hot dog
9. Animal fats for cooking or as a spread	Butter, lard
10. Eggs	Eggs
11. Fish and other seafood	White fish, dark-meat fish, salad or smoked fish, clams, mussels, shrimp, squid
12. Dairy products	Whole milk, skim or low-fat milk, condensed milk, cream, milk shake, yogurt, custard, cheese, ice crear

Some research looked at the death rate in the PREDIMED study (7,216 people were who were at high risk for cardiovascular problems, and they were followed for an average of 4.8 years. A 137 item semi-quantitative food-frequency questionnaire was administered at baseline and yearly thereafter. The first seven categories shown above were weighted positively, and the other five negatively. 323 people died (76 from cardiovascular, 130 from cancer, and the balance from non-cardio or cancer causes). Adherence to a healthier diet was done on a 60 point scale (higher scores were better). Scoring had its downside, such as listing potato chips and French fries as 'vegetables' even though they may not be

so health promoting). Scores of 40 or higher were found to have the lowest all-causes death rate.



American Journal of Clinical Nutrition, July 2014. "A provegetarian food pattern and reduction in total mortality in the PREDIMED study" Miguel Martínez-González et al.

In Ikaria the rate of heart disease is half that of America's, and there is 20% less cancer. There are also more healthy people over the age of 90 than anywhere in the world.

How many treadmills and gyms do you expect to find in remote locations of Costa Rica or Sardinia? Not many. Instead, blue zone 'exercise' is more natural such as walking locally, working the land, and using their own bodies on a daily basis to live their lives.

What are low stress lives? It includes strong family ties, a sense of purpose, a good dose of spirituality, and lots of sleep. Such a lifestyle is harder to quantify, but the net effect is still the same. Instead of having stress hormones like cortisol pumped into our bodies, those that are more beneficial to one's wellbeing result from this kind of lifestyle.

Meat in particular may be especially bad for one's health. The Nurses' Health Study followed the diets of about 120,000 30-55 year old women starting in 1976. The Health Professionals Follow-up Study followed about 50,000 men aged 40-75. Both found that eating processed and unprocessed red meat was associated

- with an increased risk of dying from cancer
- heart disease
- and having a shortened life span overall

after controlling for age, weight, drinking alcohol, exercise, smoking, family history, caloric intake, along with the intake of grains, fruits and veggies.

The largest study on diet and health co-sponsored by NIH and AARP looked at about 545,000 people over the course of a decade, men and women, ages 50-71 – and came to the same three conclusions.

Alzheimer's may also be impacted by eating meat. The lowest rates of Alzheimer's in the world is in rural India where the diet is more plant based. Japanese rates of Alzheimer's has shot up in the last few decades, and it is thought to be due to the shift away from rice and veggies to one with three times the dairy and six times the meat consumption of the past.