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"LOW CARB DIETS MAY NOT BE SAFE"

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THE MEDITERRANEAN DIET



In 2010, due to its well known international value the traditional "Mediterranean Diet" has been recognized as

**IMMATERIAL TREASURE OF THE
HUMANITY**

UNESCO (United Nations Educational, Scientific and Cultural
Organization)



Metanalysis of all studies performed since 1966 to date on relationship between mediterranean diet, chronic diseases and mortality have demonstrated a strong association between adhesion to this type of diet and improvement of health.

In particular, Mediterranean Diet has been found to be linked to 9% reduction of mortality due to cardiovascular disease, 6% to cancer, 13% decrease of incidence Parkinson and Alzheimer diseases.

These results are very important for social health, and strongly suggest that the Mediterranean Diet could be used as tool for primary prevention for chronic diseases.

Sofi F, *BMJ* 2008 Sep, Adherence to Mediterranean diet and health status: meta-analysis.



MAIN POINTS OF THE MEDITERRANEAN DIET



LARGE INTAKE OF VEGETABLES (BREAD, PASTA, LEGUMES, VEGETABLES AND FRESH FRUITS)

LIMITED INTAKE OF ANIMAL ORIGIN FOOD AND CHEESES (BETTER POULTRY AND FISH)

LIMITED INTAKE OF ALCOHOL (BETTER IF WINE)

USE OF A MAIN DISH (IT CONTAINS ALL NUTRIENTS)

EXTRAVERGIN OLIVE OIL



CONCENTRATIONS OF THE MEDITERANEAN DIET



Kcal/1g

CARBOHYDRATES

3,75

55-60 %

LIPIDS

9

<30 %

PROTEIN

animals

vegetables

4

12-15 %

VITAMIN AND MINERALS

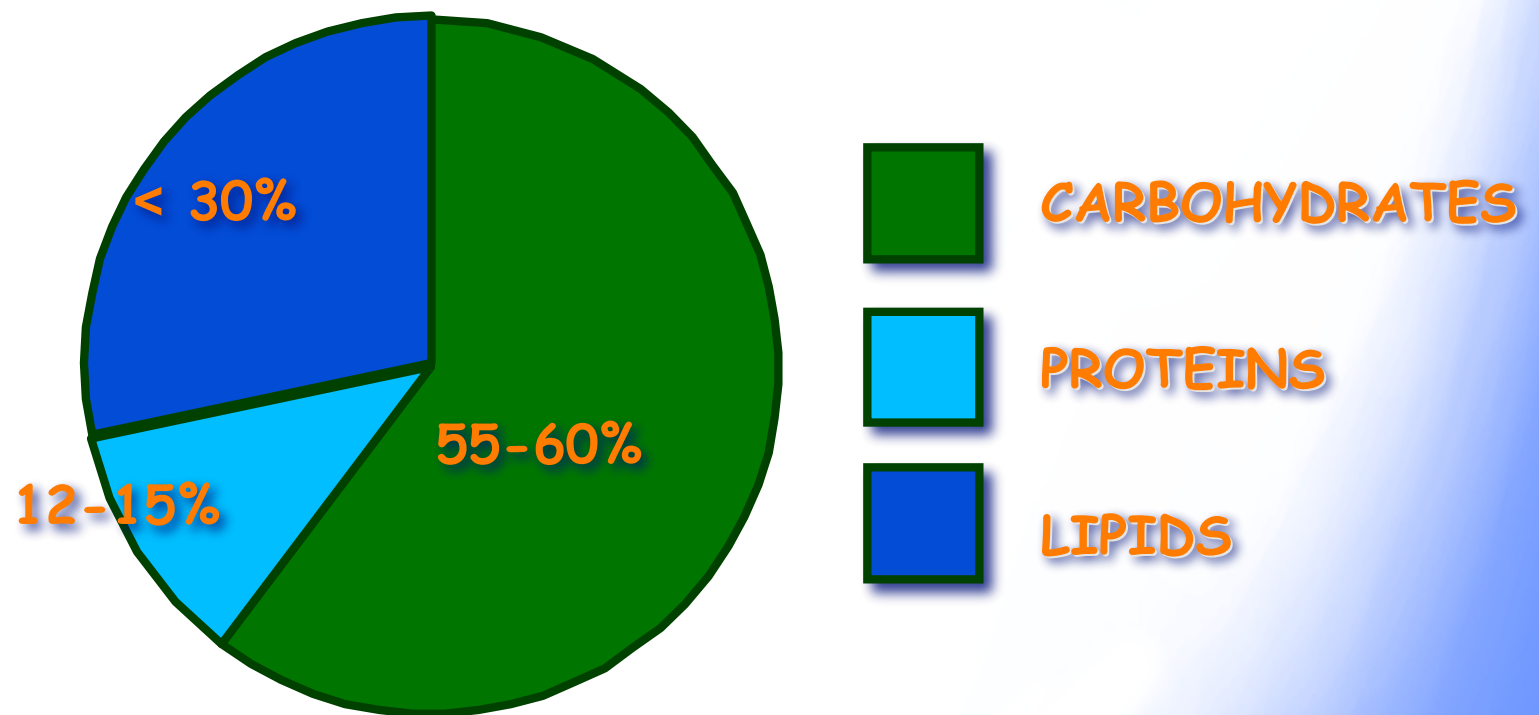
ALCOHOL

7

OF TOTAL
DAILY
INTAKE



CORRECTED NUTRITION





**DIFFERENT FOODS HAVE BEEN DIVIDED
IN 5 DIFFERENT GROUPS TO MAKE
EASIER THE KNOWLEDGE OF CORRECT
NUTRITIONAL INFORMATION**





THE 5 GROUPS



DESCRIPTION

NUTRIENTS

GROUP 1	Meat, fish, eggs, dry legums	High value proteins, Vitamins B complex, Oligoelements (Zinc, Copper, Iron)
GROUP 2	Milk, yogurth, cheeses	Calcium, High value proteins Vitamins (included B2 and A)
GROUP 3	Bread, pasta, rice, mais, oat, barley, emmer, potato	Carbohydrates, Vitamins B medium value proteins
GROUP 4	Vegetables origins oils (extra vergin olive oil) and animals (butter, cream)	Essential insature fats Liposolubil Viitamins (vit. A, D, E, K)
GROUP 5	Fruits, vegetables, fresh legums	Fiber, Vitamins (Provitamin A, vit C, etc..), Minerals, Antioxidants



If we daily eat food of the 5 different groups, with alternative choices, we would eat “with a mediterranean diet” in a correct and balanced manner.

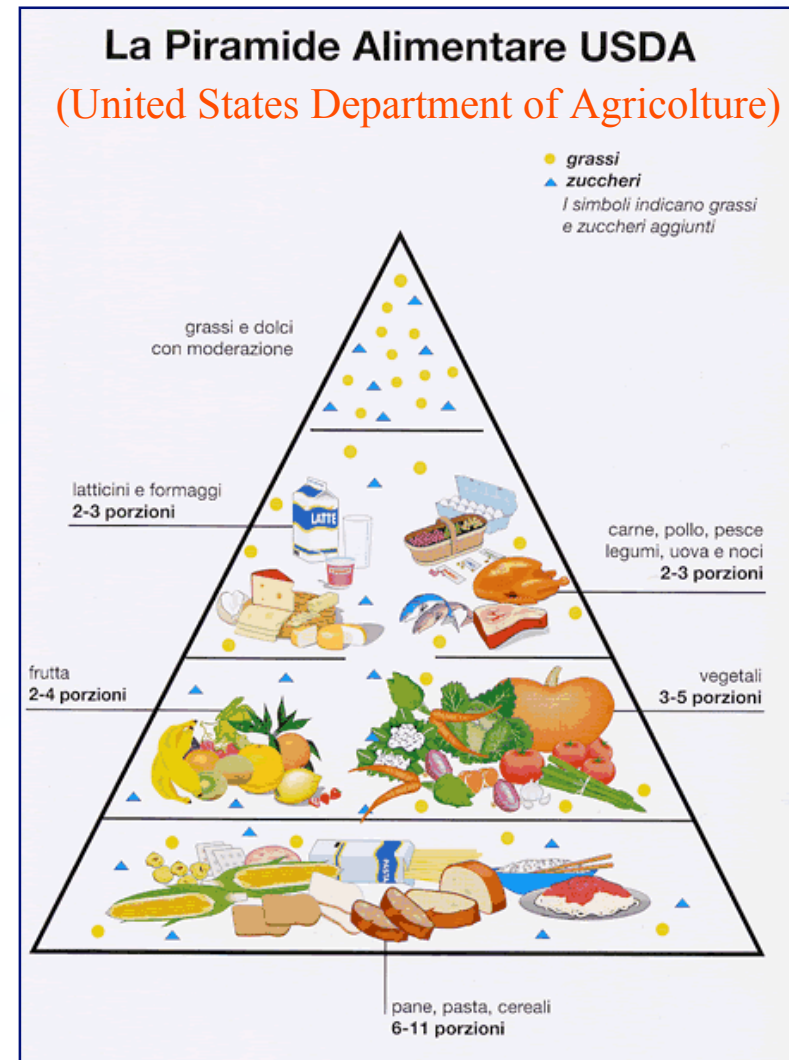
Legumes can be eaten twice / week or more.



Last but not least it has been shown that the Mediterranean Diet has a lower (50%) impact on our environment as compared to the other type of diets decreasing the greenhouse effect.

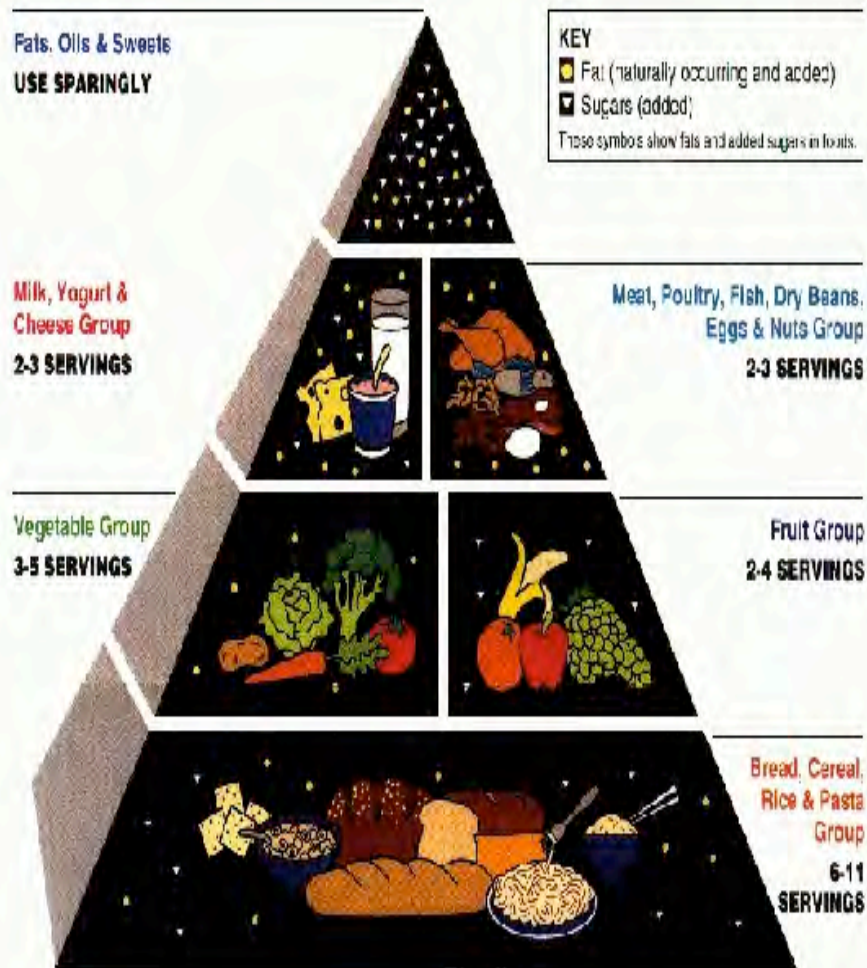


DIFFERENT PIRAMIDS





DIFFERENT PIRAMIDS



The Traditional Healthy Latin American Diet Pyramid

Daily Beverage Recommendations:
6 Glasses of Water



Alcohol in moderation



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MAIN MISTAKES OF FAD DIETS



LACK OF SCIENTIFIC EVIDENCES

PROMISES OF RAPID WEIGHT LOSS

**MONOTONOUS FOOD CHOICES OR UNLIMITED
FOOD OF SOME CHOICES (I.E FRUITS AND/OR
VEGETABLES)**

**MAGICAL FOOD OF FOOD COMBINATION (I.E. ONLY
PROTEINS FOR LUNCH AND CARBOHYDRATES FOR DINNER
OR VICEVERSA)**

RIGID AND WRONG REGIMEN (I.E. HYPERPROTEIC)



CONSEQUENCES OF FAD DIETS



LACK OF DIFFERENT NUTRIENTS SUCH AS
PROTEINS, MINERALS, ETC

ANEMIA, OSTEOPENIA (AND OSTEOPOROSIS)

REGAIN OF THE LOST WEIGHT AFTER
DISCONTINUATION OF THE DIET (REBOUND EFFECT)

KETOSIS

LOST OF LEAN BODY MASS UTILIZED FOR ENERGY

LIVER AND KIDNEY OVERWORK IN HYPERPROTEIC
DIETS



LOW CARBOHYDRATE DIETS (1)



"Low carbohydrate diets have a long history. In fact the Greek Olympians are said to have eaten high meat, low vegetable diets to improve athletic performance. Furthermore low carbohydrate diets appear to work, as they produce rapid weight loss in the first week.

Since the body's demand for glucose is constant, body glycogen stores are mobilised and used in the early phases of a low carbohydrate diet, and for each gram of glycogen used 2-4 grams of intracellular H₂O are lost (intracellular H₂O maintains isotonicity)."

Roberts D, MJA 2001, Denke Am J Card 2001, Stein Am Diet Assoc 2000



LOW CARBOHYDRATE DIETS (2)



“Thus, there is greater water and hence weight loss in the early days of this type of diet. Water equilibrium is re-established in subsequent weeks, so that, in the longer term, weight loss simply reflects the energy deficit.

Energy-nitrogen balance studies have demonstrated that the greater weight loss on a low carbohydrate, high fat diet is accounted for by losses in body waters.”



LOW CARBOHYDRATE, HIGH PROTEIN DIETS



“There is evidence that high-protein diets are more satiating. Individuals feel fuller and then eat less after a meal with a high protein content (31%-54% energy).

A low fat, higher-protein diet (25% of energy) also produces a reduced energy intake and greater weight and fat loss over six months compared with a low fat diet with 12% energy from protein.”



LOW CARBOHYDRATE, HIGH PROTEIN DIETS (2)



“Another problem of high protein diets is the extra solute load placed on the kidneys leading to greater production of nitrogen waste products, particularly in situations of high water loss from perspiration or inadequate fluid intake contributing to dehydration.”



CONSEQUENCES OF LOW CARB DIETS



Ketosis (formation of ketones such as acetone, acetoacetato, β -hydroxybutyrate (BHB), which might lead to intoxication.

Some data suggest that the mild euphoria often noted with fasting or low-carbohydrate diets may be due to shared actions of BHB and GHB (γ -hydroxybutyrate) on the GABA B receptor in the brain.

Liver and kidney overwork with alteration of several indexes (i.e hyperuricaemia)



KETONES

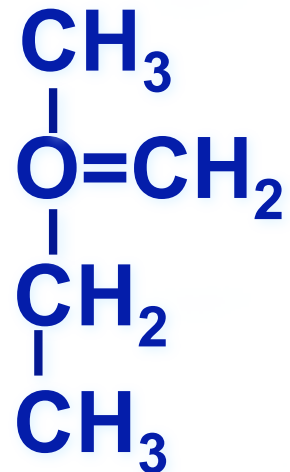


Acetone, Acetoacetate,
 β -hydroxybutyrate
(BHB).

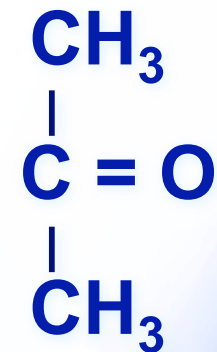
Acetoacetate:



β -hydroxybutyrate:



Acetone:





MAIN HYPERPROTEIN DIETS



ATKINS DIET	Low carb, high proteins	Unbalanced, high fats and cholesterol Important side effects (cheto-sis)
SCARSDALE DIET	High proteins	Unbalance, it can induce keto-sis and lack of nutrients
ZONE DIET	High proteins, low carbohydrates to avoid hyperinsulinism	Unbalanced, high variability among individuals; goal: give psychophysical equilibrium.



THE ROLE OF PASTA



The use of pasta in either normocaloric or hypocaloric diets plays a pivotal role since it gives the correct amount of complex carbohydrates, high value proteins, fibers, vitamins and minerals.

Thus, pasta can be considered an important food in both normocaloric and hypocaloric diets.



CONCLUSIONS



In conclusion, data from clinical studies indicate that a low carbohydrates diet is not healthy, but often can be extremely unhealthy leading to several side effects in different organs.