

Mediterranean Diet, Nutrition Policies and Obesity

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**HEALTHY URBAN PLANNING AND LOCAL GOVERNMENTS
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NUTRITION POLICY

An array of coordinated activities developed at governmental level, aimed at assuring a healthy population through availability of safe and sufficient food

NUTRITION POLICY

Nutrition policy should have a concrete strategy of action.

Action strategies should be based on political decisions

NUTRITION POLICY

**The nutritional policy plan is
multi-dimensional**

**It refers to agricultural and fishing
policy and to consumer education**

European Union (25)

estimated 14m overweight
increasing by 400,000 per year

of which over 3m obese
increasing by 85,000 per year

WHY ACT?

OBESITY IS A PROBLEM..

Prevalence of overweight (BMI \geq 25),
range from least to most in the European Region

	Least	Most
Adult men	26% in the Kyrgyz Republic	79% in Greece
Adult women	23% in Switzerland	74% in Greece
Adolescents (14-17 yrs)	8% in Slovakia	25% in Great Britain
Children (7-11 yrs)	10% in Russia	36% in Italy

Sources: IOTF 2005; Lobstein & Frelut 2003

Child obesity

Rising rapidly in Europe

‘big business’ vs children...

Not responsible for 'lifestyle choices'



**Commercial environment undermines
the health messages**

**Physical environment undermines
physical activity**

Telling a child to resist a torrent of

economic

social

and

commercial pressures

LIMITED EVIDENCE OF EFFECTIVE POLICIES...

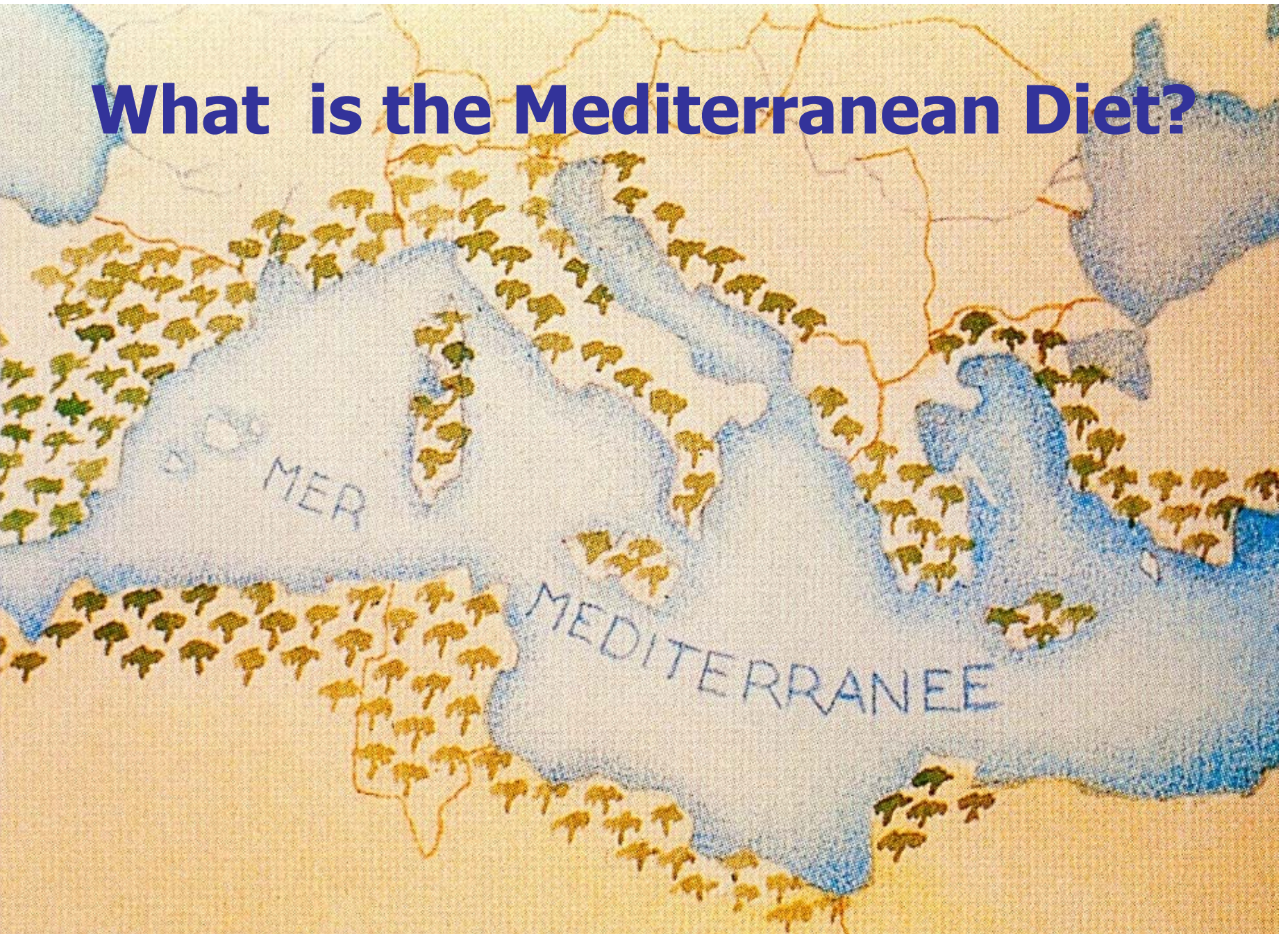
“...no country has yet developed and implemented a coherent programme of action to prevent further weight gain in the population and to manage its current obesity burden...”

Source: Swinburn et al, Obesity Review 2005

THE OBJECTIVE vs. THE PROBLEM

- ☐ The objective is to provide a practical answer to a complex question
- ☐ The problem is to communicate the findings effectively including information about the strength of the "evidence" provided

What is the Mediterranean Diet?



Life expectancy / Disease Rates in U.S., Greece and Japan, in 1960's

		U.S.	Greece	Japan
Life expectancy at age 45 in years	(M)	27	31	27
	(F)	33	34	32
Coronary Heart Disease	(M)	189	33	34
	(F)	54	14	21
Cerebrovascular Diseases	(M)	30	26	102
	(F)	24	23	57
Breast Cancer	(F)	22	8	4
Stomach Cancer	(M)	6	10	48
	(F)	3	6	26
Colon, Rectal Cancer	(M)	11	3	5
	(F)	10	3	5
Total Cancer	(M)	102	83	98
	(F)	87	61	77

Source: W. Willett, Science 1994

Dietary Characteristics in U.S., Greece and Japan, in 1960's

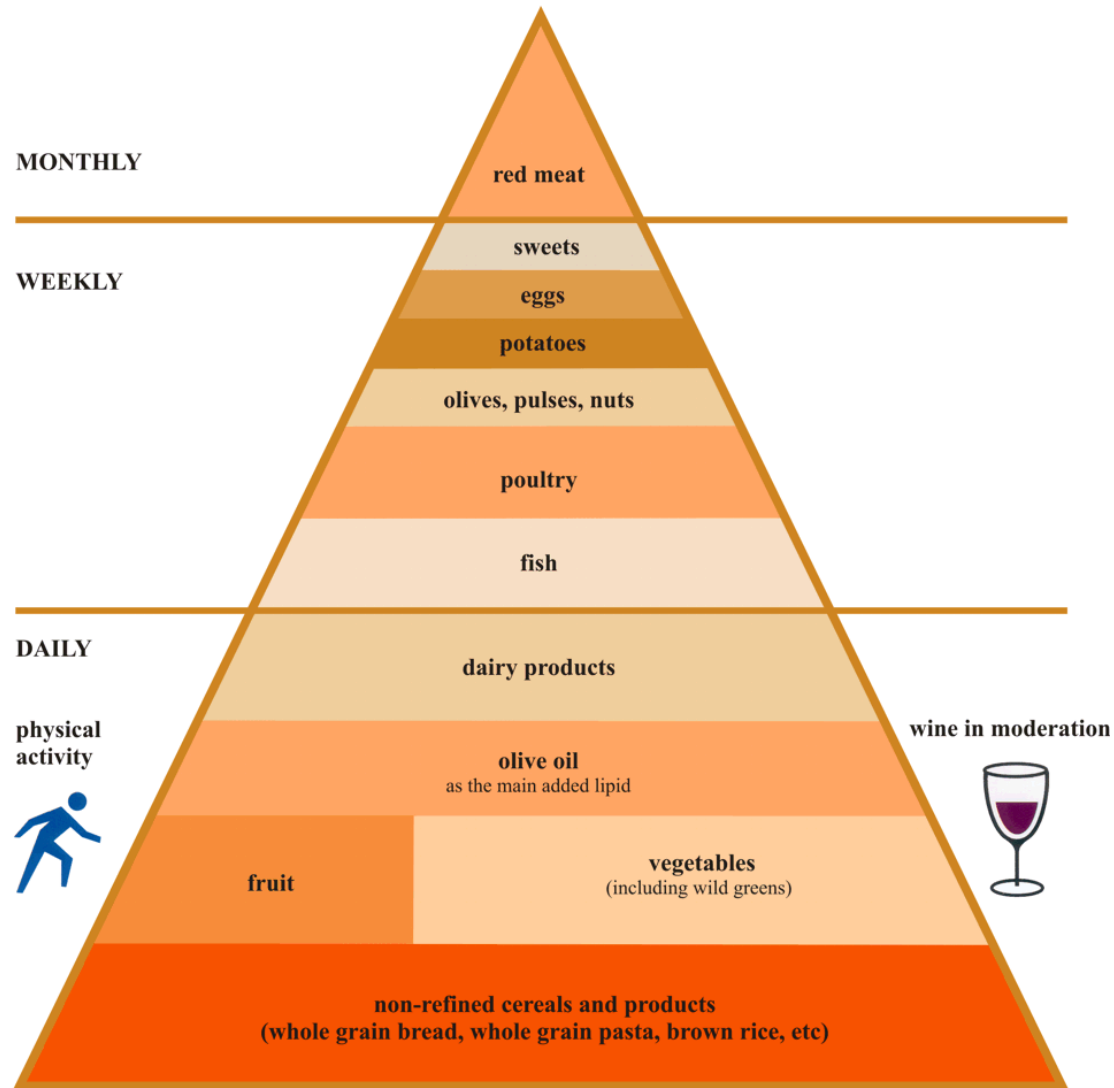
Dietary Characteristics	U.S.	Greece	Japan
Fat (% Energy)	39	37	11
Saturated Fat (% Energy)	18	8	3
Vegetables (g/day)	171	191	198
Fruits (g/day)	233	463	34
Legumes (g/day)	1	30	91
Breads/Cereals (g/day)	123	453	481
Potatoes (g/day)	124	170	65
Meat (g/day)	273	35	8
Fish (g/day)	3	39	150
Eggs (g/day)	40	15	29
Alcohol (g/day)	6	23	22

Source: W. Willett, Science 1994

The MD can be thought of as having 9 components:

- **high olive oil consumption**
- **high consumption of legumes**
- **high consumption of cereals**
- **high consumption of fruits**
- **high consumption of vegetables**
- **moderate consumption of dairy products, mostly as cheese and yogurt**
- **moderate to high consumption of fish**
- **low consumption of meat and meat products**
- **moderate wine consumption, if it is accepted by religion and social ground**

MEDITERRANEAN DIET



Also remember to:

- drink plenty of water
- avoid salt and replace it by herbs (e.g oreganon, basil, thyme, etc)

Source: Supreme Scientific Health Council, Hellenic Ministry of Health

Many studies have evaluated the association between single foods, food groups, or nutrients and chronic diseases

Last 10 years: focus on the identification of a dietary pattern that maximizes longevity

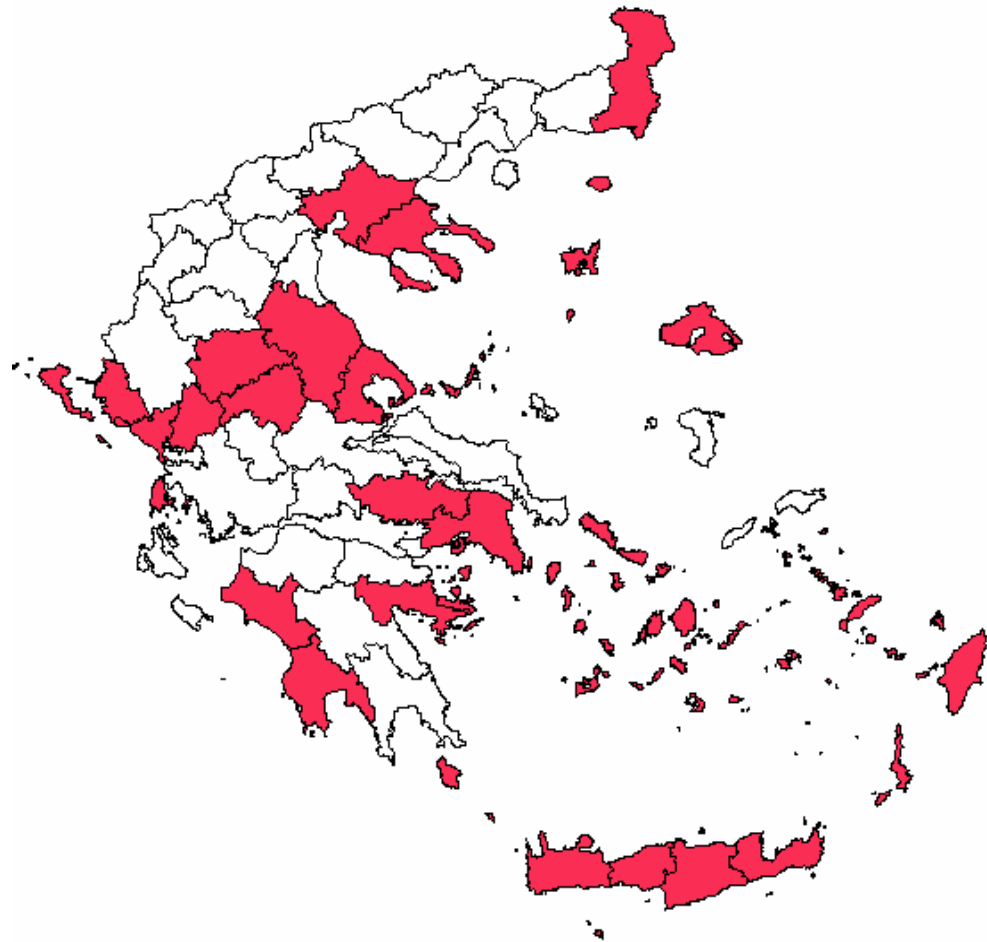
Dietary patterns have the ability to:

**integrate complex or subtle
interactive effects or many dietary
exposures**

and

**bypass problems generated by
multiple testing and the high
correlations that may exist among**

EPIC GREECE



Aim

***To evaluate the association between
either:***

**degree of adherence to the traditional,
Greek-Mediterranean diet,**

or

individual food groups

and

total mortality during 2-8 years of follow-up

Results

per 2-unit increase in Mediterranean diet score

A higher degree of adherence to the Mediterranean diet was associated with a significant reduction in :

total mortality

adjusted mortality ratio 0.75

coronary heart disease

adjusted mortality ratio 0.67

cancer

adjusted mortality ratio 0.76

**Rather than single foods or nutrients,
a global health dietary pattern could
exert protective effect**

**The combination of different types of
food with healthy characteristics
might be necessary to express their
protective effect**

Results

a 2-unit increase in Mediterranean diet score

was associated with

27 % reduction in overall mortality

among individuals diagnosed
as having coronary heart disease

Olive oil and the Mediterranean diet: beyond the rhetoric

- > 13,5 % of total calories from olive oil
- < 6,8 % of total calories from olive oil

Consumers of larger quantities of olive oil have

low saturated fat intake,

**high consumption of vegetables and legumes
and**

more adequate vitamin intake

Report joint WHO/FAO consultation

A diet

low in saturated fats, sugars and salt

and

high in vegetables and fruits

together

with regular physical activity

will reduce morbidity and mortality

**An increase of olive oil consumption
by one standard deviation was associated with
significant reduction
of both systolic and diastolic blood pressure
across the 20 343 individuals**

Conclusion

There was no important association

Between

Mediterranean diet score

and

BMI and W/H ratio

Med Diet Healthy alternative approach

- Not sharply different from other recommended diets
- Two elements distinguish it from other prudent diets
 1. *It stresses the pattern rather than individual components and*
 2. *Provides no restriction on lipid intake so long as they are not saturated and are preferably in the form of olive oil*

**The standard approach for
weight loss is**

**a low-fat diet high
carbohydrate diet,**

**with energy level below
maintenance**

To reevaluate of whether

low-fat diets

**should be the preferred approach
for weight reduction**

Why in the USA Are Gaining Weight?

Data from NHANES I, II, III (1971-1994)

- Total fat intake as a percent of energy has decreased somewhat, but remains above recommended levels
- Total mean energy intake has increased approximately **300 kcal**
- Exercise and physical activity has declined

Briefel et al. 1995

Randomized clinical trial in obese men and women

mean BMI: 34.5kg/m²

comparing low CHO (<20 gms/day) vs low fat

6 months intervention

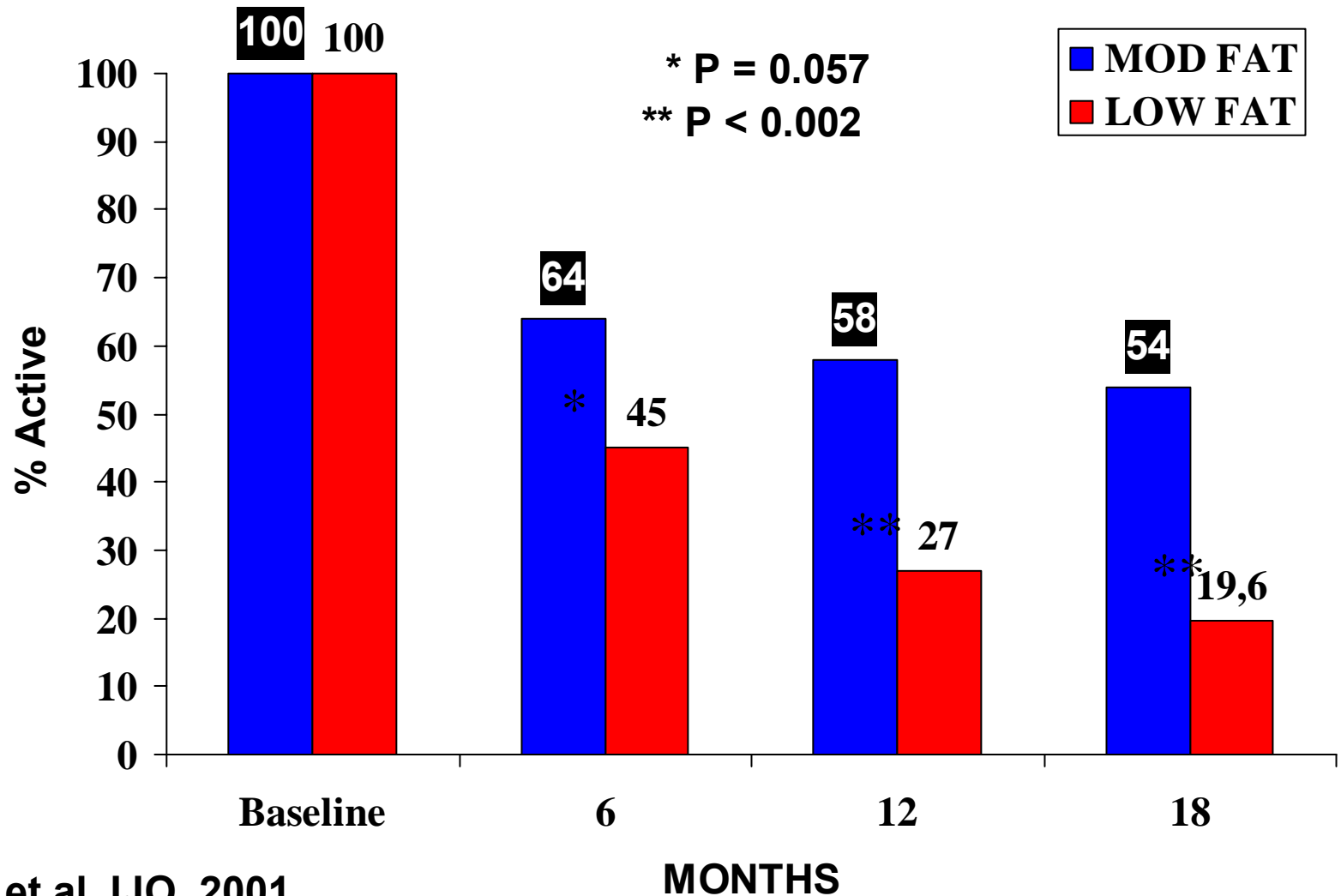
Results:

low CHO	- 13.8%
low fat	- 8.8%

Westman et al, Circulation, 2002

- Randomized, prospective 18 month trial in a free-living population
- 101 overweight men and women
- mean BMI: 33.5 kg/m²
- all subjects had reported numerous previous weight loss attempts

PARTICIPATION RATES



The results at **6 months** showed similar amounts of weight loss in the two groups, about 5kg.

However, the moderate fat group maintained their lower average weight through the **18 months** study period

Whereas

the low-fat group regained the body weight and ended the study with a net increase compared to baseline.

Conclusions

- Reduction of percent of energy from fat causes a small, short-term reduction in body weight
- Data does not support superiority of low fat diets for weight loss in long term trials
- A moderate-fat, Mediterranean diet can be a flavorful, successful approach to long term weight loss

TRADITIONAL FOODS



Πήλινο αγαλματίδιο γυναίκας που διδάσκει μαγειρική σε κορίτσι, Τανάγρα, πρώτο τέταρτο 5ου αι. π.Χ., Μουσείο Καλών Τεχνών της Βοστώνης.

Traditional Mediterranean diet



vs



Fast food

**"Let food be thy medicine
and
medicine be thy food"**

Hippocrates

THANK YOU FOR YOUR ATTENTION

