P.A.N.
Prevenzione Alimentazione Nutrizione

II Giornata

Signora Dieta Mediterranea:
più di 50 anni ma non li dimostra …

Lunedì 14 dicembre 2009

CAMERA DEI DEPUTATI
Palazzo Marini Sala delle Conferenze
Via del Pozzetto, 158
Roma (P.zza San Silvestro)

SCIENZE NUTRIZIONALI NELLA STRATEGIA DI PREVENZIONE: LA DIETA MEDITERRANEA BIOLOGICA NELL'ERA POST- GENOMICA

LAURA DI RENZO
Biologa molecolare. Docente di Scienza e Tecnica Applicata - Università di Roma "Tor Vergata". Dirigente ricerche Istituto Nazionale per la Dieta Mediterranea e la Nutrigenomica

Durante gli ultimi dieci anni una rapida espansione di alcuni settori scientifici e soprattutto della quantità di evidenze epidemiologiche, ottenute nella popolazione generale, ha contribuito a chiarire il ruolo della dieta nella prevenzione e nel controllo della morbilità e mortalità precoce causate da malattie non trasmissibili. Inoltre, si è giunti all'identificazione di alcuni fra gli specifici componenti della dieta, che contribuiscono ad aumentare le probabilità di sviluppare questo tipo di malattie, e degli interventi da attuare nel singolo individuo per modificarne l'azione.

Le malattie croniche sono nella maggior parte dei casi prevedibili, come dimostrano i numerosi studi epidemiologico-nutrizionali finora svolti. L'età, il sesso e la suscettibilità genetica non sono modificabili, ma possono esserlo molti fattori di rischio associati all'età ed al sesso. Tali fattori di rischio comprendono fattori comportamentali, come abitudini alimentari inadeguate, scarsa attività fisica, abitudine al fumo; fattori biologici, come dislipidemie, ipertensione arteriosa, sovrappeso, obesità, iperinsulinemia e fattori socio-economici, culturali e ambientali.

Prende sempre più piede l'idea che la dieta rappresenti il maggiore determinante modificabile delle malattie croniche, grazie anche al crescente sostegno, fornito dai dati scientifici, al concetto che le sue modificazioni inducono importanti effetti, sia positivi sia negativi, sulla salute durante tutta la vita. Adattamenti alla dieta possono non solo influenzare la salute di oggi, ma anche agire nel determinare se un soggetto svilupperà o meno, nel corso del tempo, varie patologie. Peraltro, questi concetti finora non hanno determinato cambiamenti nelle decisioni strategiche o nella pratica.

Gli alimenti considerati nelle Filiere di frutticoltura, olivicoltura, orticoltura e colture erbacee da pieno campo rappresentano la colonna portante del regime alimentare noto come "Dieta Mediterranea", generalmente adottato, sebbene con numerose varianti, nei paesi che si affacciano sul bacino del Mar Mediterraneo e fra questi l'Italia. Il ruolo preventivo della dieta mediterranea è stato messo in evidenza dallo Studio Cooperativo Internazionale di Epidemiologia della Cardiopatia Coronarica, meglio noto come Seven Countries Study (Studio dei Sette Paesi: Alberti-Fidanza, 1999).

In seguito, nel 1960, la dieta dei cittadini di Nicotera è stata considerata la Dieta Mediterranea Italiana di Riferimento. Caratterizzata dal consumo bilanciato di alimenti ricchi

di fibre, antiossidanti e grassi insaturi, la DM offrirebbe un approccio alternativo salutare volto ad abbassare il consumo di grassi animali e di colesterolo nella dieta ed inoltre l'appropriato bilancio tra apporto e dispendio energetico. Molti dei componenti caratteristici della Dieta Mediterranea tradizionale sono conosciuti per avere effetti positivi sulla salute e sul benessere e possono essere utilizzati per descrivere il concetto di alimenti funzionali.

I prodotti ortofrutticoli e le noci sono tutti ricchi in fenoli, flavonoidi, isoflavonoidi, fitosteroli e residui bioattivi acido-essenziali che forniscono protezione alle malattie. I carotenoidi, l'acido folico e la fibra, che sono abbondanti nella Dieta Mediterranea, sembrano svolgere ruoli importanti nella prevenzione della malattia coronarica. Il consumo di verdure, fonte importante di fitosteroli, è associato con una riduzione del livello del colesterolo nel siero e del rischio cardiovascolare.

Ciò ha potuto essere di grande importanza nelle società sviluppate dove la malattia cardiovascolare è la prima causa di morte. La frutta inoltre fornisce la fibra, così come le vitamine, i minerali, i flavonoidi e i terpeni, molti dei quali forniscono protezione contro i processi ossidativi. Grazie alle sostanze fitoestrogeniche contenute, l'aumentato consumo di frutta e verdura può offrire un'alternativa a terapia di riassetto ormonale nella donne in menopausa.

Molti flavonoidi ed isoflavonoidi purificati fra gli abituali vegetali consumati nello stile Mediterraneo hanno mostrato di possedere questa attività estrogenica. Gli acidi grassi poli-insaturi (acido eicosapentaenoico e docosaexaenoico) contenuti nel pesce regolano efficacemente i fattori emostatici, proteggono dalle aritmie cardiache, dal cancro e dall'ipertensione e svolgono un ruolo vitale nel mantenimento delle funzioni neurali e nella prevenzione di determinati disordini psichiatrici. L'accumularsi delle evidenze scientifiche suggerisce che condire gli alimenti con l'olio d'oliva, riduce il rischio di malattie coronariche, previene l'insorgenza tumorale e modifica le risposte immuni ed infiammatorie.

Inoltre sembra avere un ruolo anche nella mineralizzazione ossea, riducendo così il rischio di osteoporosi. Le erbe aromatiche, sapientemente utilizzate nella dieta Mediterranea, sono anche ottimi alleati nell'aumentare il valore nutritivo dell'alimento consumato. Il finocchio e l'erba cipollina contengono grandi quantità di flavonoidi; l'aglio e la cipolla di allucina; il cappero, con il suo effetto diuretico ed ipotensivo, contiene i flavonoidi kaempferolo, quercitina e gli acidi idrocinnamici che possiedono noti effetti antinfiammatori ed antiossidanti.

I polifenoli del vino rosso possiedono attività antiossidante tale da apportare un'azione citoprotettiva i cui effetti si manifestano inducendo un cambiamento nel profilo delle lipoproteine, nella coagulazione del sangue, nell'aggregazione piastrinica, nei meccanismi ossido-riduttivi e nella funzione endoteliale. L'endotelio regola il tono vascolare circostante bilanciando delicatamente la vasodilatazione (ossido nitrico, NO) e la vasocostrizione (endoteline, fattori prodotti dall'endotelio stesso) in risposta agli stimoli.

Il vino ed altri derivati dell'uva rossa ricchi di resveratrolo (un polifenolo dello stilbene) determinano un effetto vasodilatatorio endotelio-dipendente tramite la up-regolazione della produzione di NO, ed esplicano una significativa attività antiossidante.

Si assiste oggi in Italia ad un deciso allontanamento dalla tradizionale Dieta Mediterranea di riferimento italiana. E' indispensabile una profonda inversione di tendenza. Lo spostamento del profilo dell'intera popolazione verso una direzione più salutare è l'obiettivo degli interventi di prevenzione primaria. Per ottenere i migliori risultati nella prevenzione delle malattie croniche è fondamentale che gli interventi decisionali e le strategie politiche che vengono messi in atto, riconoscano il ruolo essenziale della dieta, della nutrizione e dell'attività fisica.

P.A.N.
Prevenzione Alimentazione Nutrizione

II Giornata
Signora Dieta Mediterranea: più di 50 anni ma non li dimostra …

Lunedì 14 Dicembre 2009, ore 08.30 – 14.00

CAMERA DEI DEPUTATI
Palazzo Marini - Sala delle Conferenze
Via del Pozzetto, 158 - Roma (Piazza San Silvestro)





Scienze Nutrizionali nella strategia di prevenzione: La dieta Mediterranea Biologica nell'era post-genomica

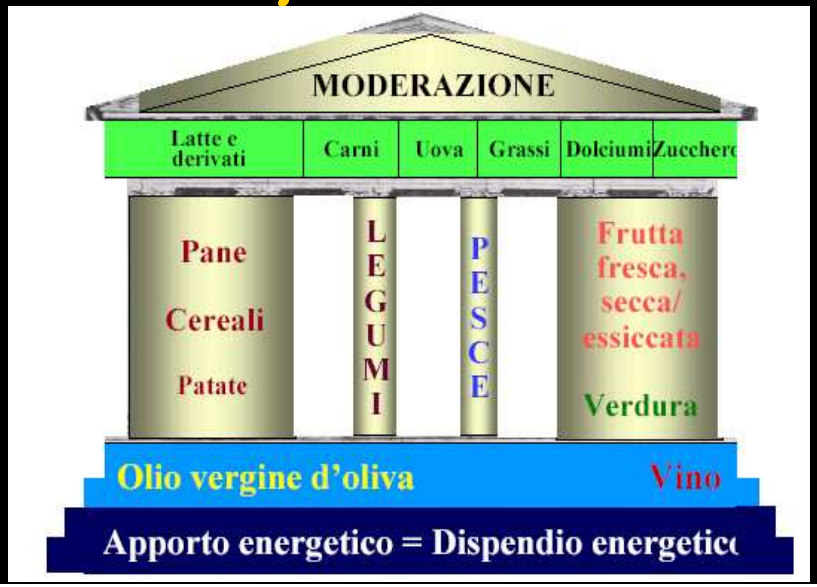
Laura Di Renzo, PhD
Università di Roma Tor Vergata

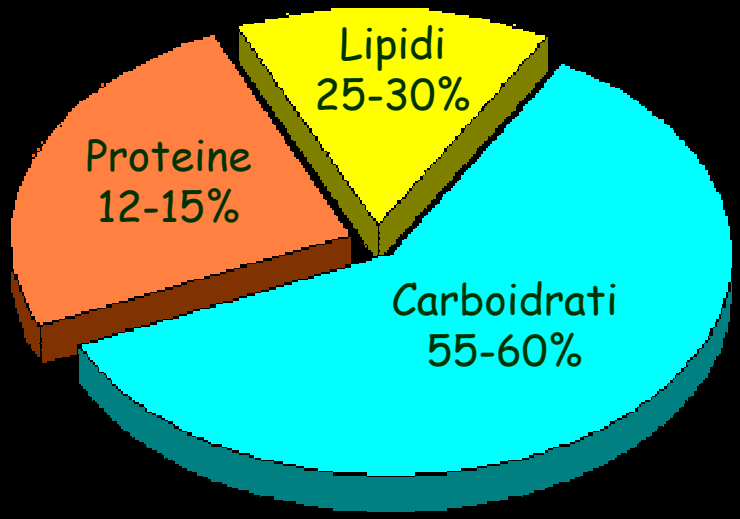
…una dieta "che si rispetti"…
…come quella mediterranea….
…deve avere queste proprietà:

EQUILIBRATA BILANCIATA

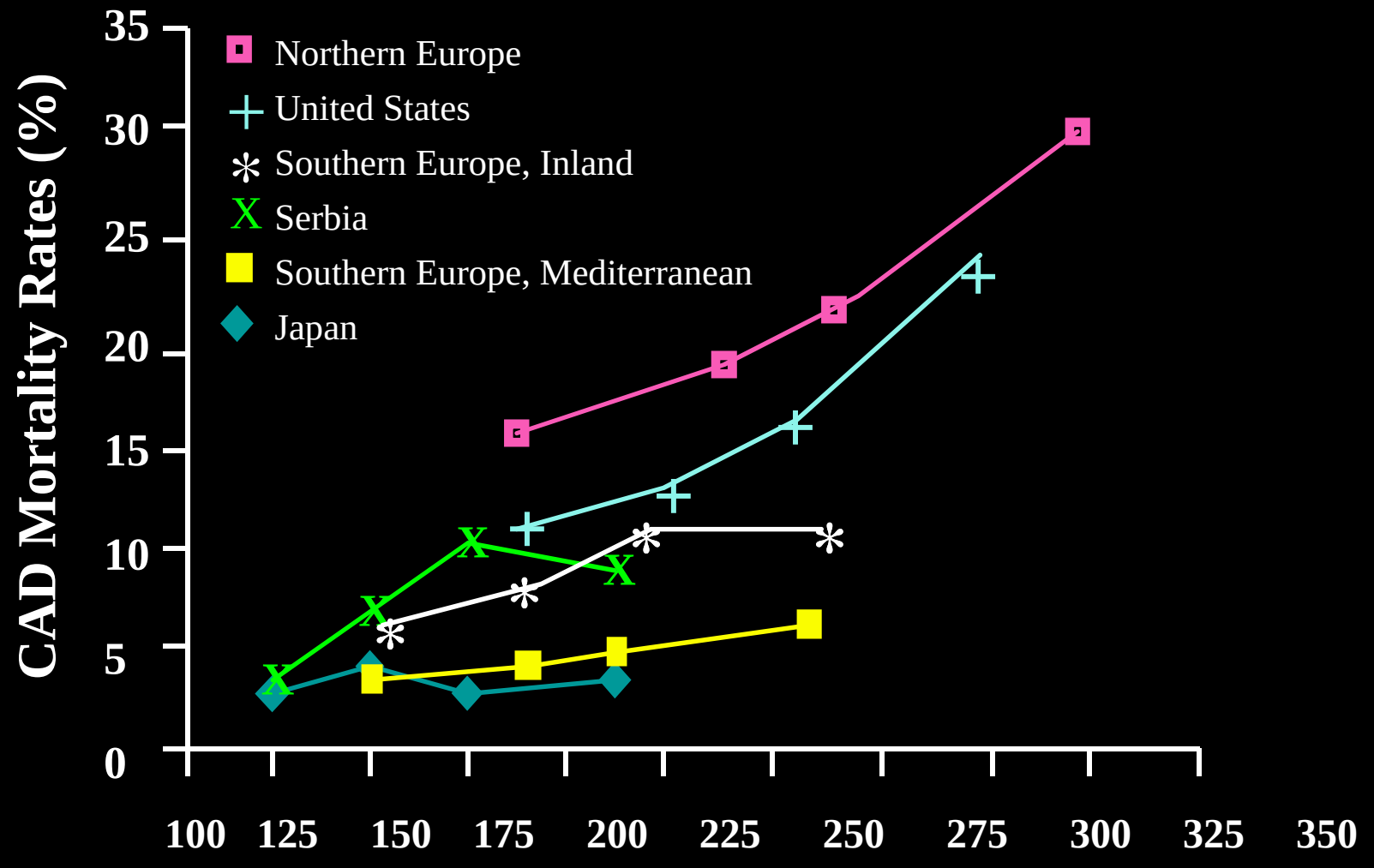
ADEGUATA OTTIMALE

Il fabbisogno energetico giornaliero deve corrispondere a:



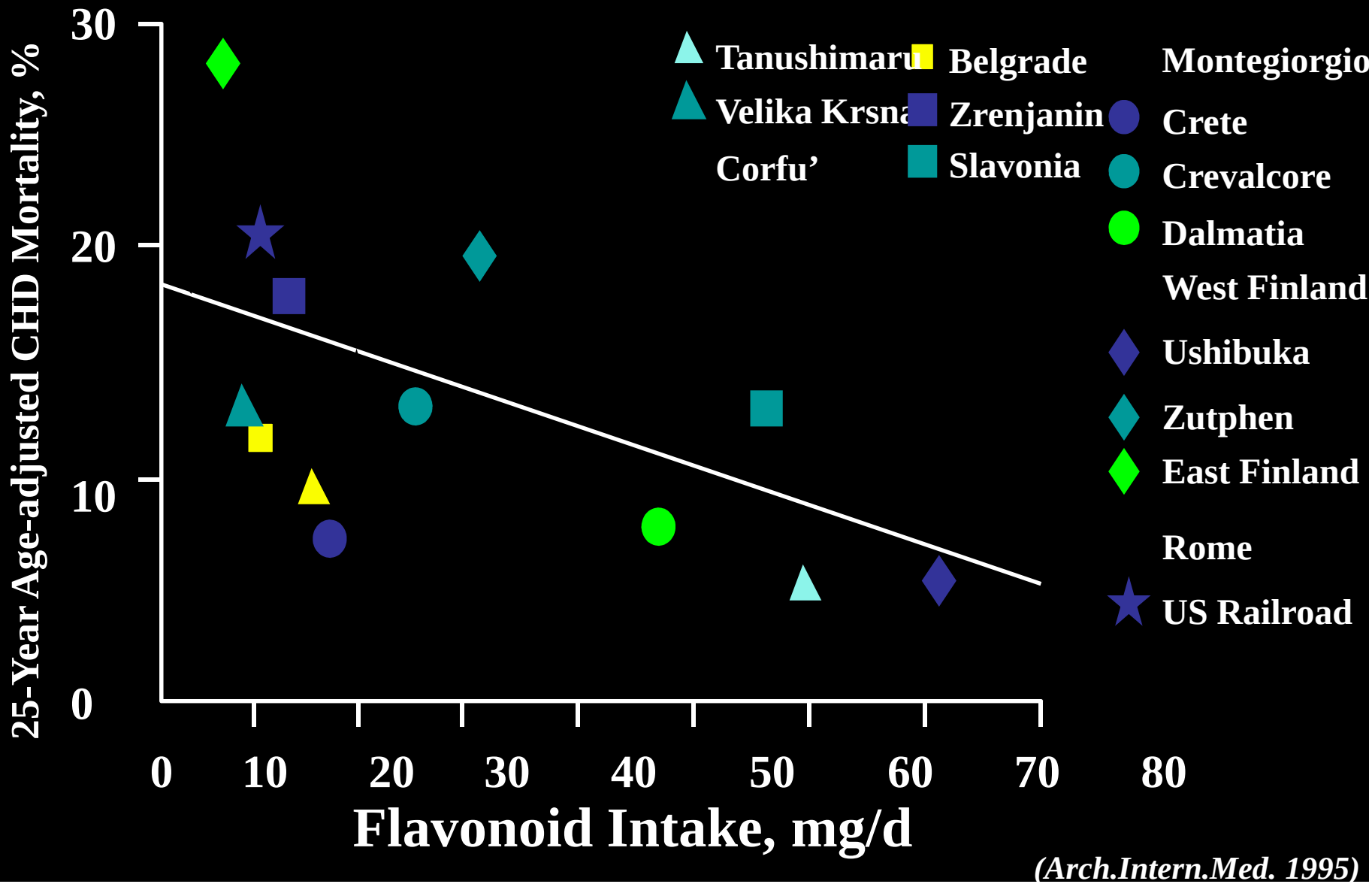


Serum Cholesterol and Long-term CAD Mortality
25-year Follow-up of the Seven Country Study



(JAMA. 1995;274:131)

FLAVONOID INTAKE AND AGE-ADJUSTED MORTALITY FOR CHD
(25 years follow-up of the Seven Countries Study)



(Arch.Intern.Med. 1995)

Mortality Rate

	Mediterranean Europe (Dalmazia, Crevalcore, Montegiorgio, Creta, Corfu)		Non Mediterranean Europe (Finlandia, Slavonia, Velika)
Risk	3.506	15 years	2.701
All Causes of Death	1.612		2.078
CHD	284		655
Risk	3.598	25 years	2.884
All Causes of Death	4.299		5.550
CHD	978		1.947

International Cooperative Study on coronary heart disease

Subjects and Methods

- **Nicotera 1960: 37 subjects, 19 females and 18 males, from 40 to 60 years.**

Nicotera 1996: 80 subjects, 37 females and 43 males, from 40 to 60 years.

- **Food Intake: semiquantitative questionnaire of food frequency, using the "Frequency of food consumption questionnaire (SQFF)" proposed and validated for the Italian population.**



- **Nicotera was a town of "Seven Country Study".**

- **From 1974 to 1996, the total consumption of pasta and bread (evaluated cumulatively), and meat (total meat consumption and bovine meat only) were evaluated from total expenditure per year (taking into account inflation). Mortality rates for cancers at different sites (colon, breast, pancreas) were recorded, and expressed as death per year per 10^{11} inhabitants.**

De Lorenzo et al. ***MODIFICATION OF DIETARY HABITS ("MEDITERRANEAN" DIET) OF CANCER MORTALITY IN A SOUTH ITALY VILLAGE FROM 1960 TO 19966***

Ann New York Academy Sci, 1999.

Use of quality control indexes in Moderately Mediterranean Diets for treatment of obesity

1500 kcal MHD

Nicotera DIET

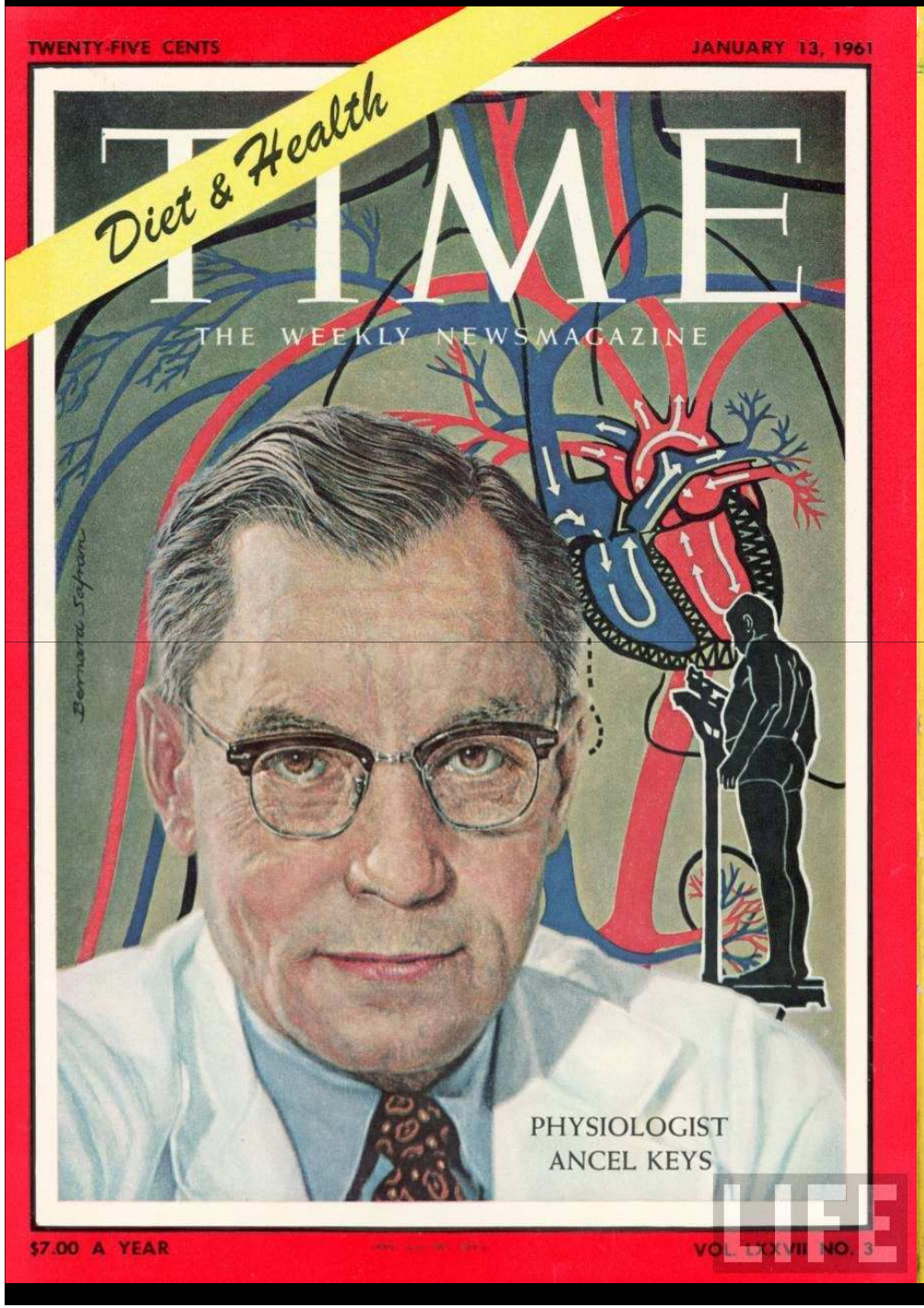
Meat (130 g), or fish (170 g) or cheese (70 g) portion.

Weekly frequency:
animal foods was 4 times for fish, 2 for meat and 2 for cheese.

Daily intake of carbohydrates derived mainly from pasta (80 g), bread (100 g) and fresh legumes (60 g, 3 times/week).
Daily intake for fruit was 500 ± 50g and for vegetables 250 ± 50g.

Extravirgin olive oil was taken daily in a amount of 20 ± 5g.
Fibers intake (27-30 g/day) and of the main micronutrients covered the Italian Recommended Daily Allowances

A. De Lorenzo et all: Diab Nutr Met 2001; Diabetes Care 2001 and Chest 20



EAT WELL AND STAY WELL

Ancel & Margaret Keys

What YOU should know about the latest medical discoveries about how your diet affects your heart, arteries, and blood cholesterol level. Saturated and unsaturated fats and modern reducing clearly and simply explained.

How to select and prepare foods for eating pleasure and health, with appetizing recipes and menus combining the latest nutritional knowledge and gourmet satisfaction.

FOREWORD BY

Paul Dudley White, M.D.

United States Study NIH-AARP, 1995-2005

214,284 men 166,012 women

Adherence to a Mediterranean style diet

- Vegetables
- Legumes
- Fruits and nuts
- Whole grain
- MONO/SAT
- Fish
- Energy
- Red meat/dairy

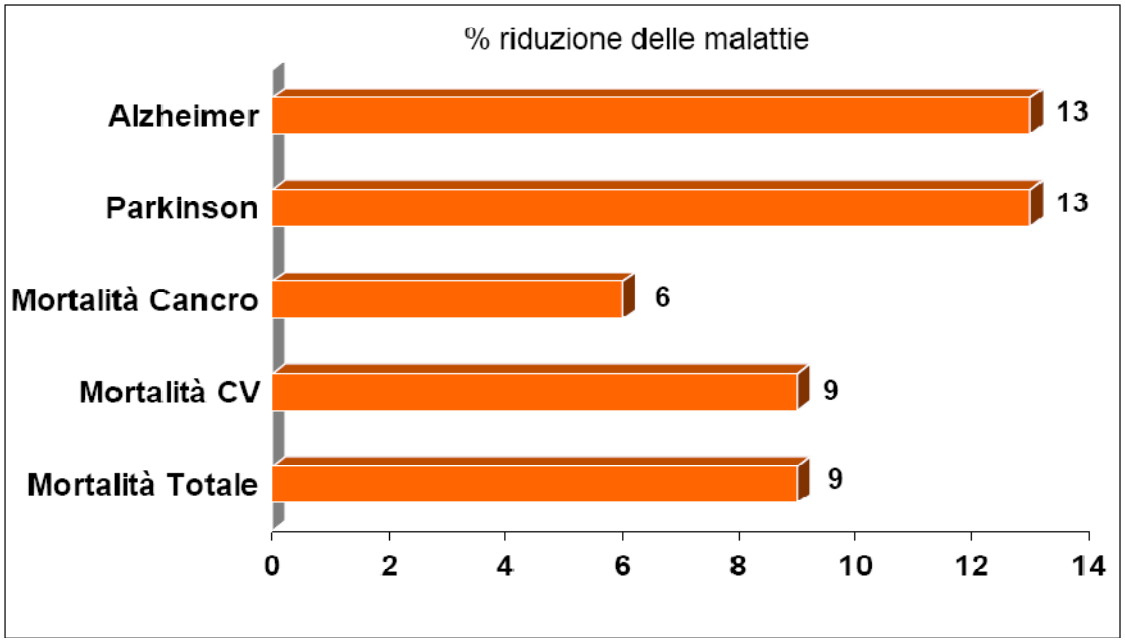
→ **All cause mortality - 21%**

↓ **CVD mortality -22%**

↓ **Cancer mortality -17%**

Panagiota N et al Arch Intern Med 2007

L'ADERENZA ALLA DIETA MEDITERRANEA SI ASSOCIA AD UN SIGNIFICATIVO MIGLIORAMENTO DELLA SALUTE



12 studi, 1.574.299 persone, follow up variabile da 3 a 18 anni

F. Sofi et al. Meta-analysis, BMJ september 2008

BMJ

RESEARCH

Adherence to Mediterranean diet and health status: meta-analysis

Francesco Sofi, researcher in clinical nutrition,[1,2,5] Francesca Cesari, researcher,[1] Rosanna Abbate, full professor of internal medicine,[1,5] Gian Franco Gensini, full professor of internal medicine,[3] Alessandro Casini, associate professor of clinical nutrition[2,4,5]

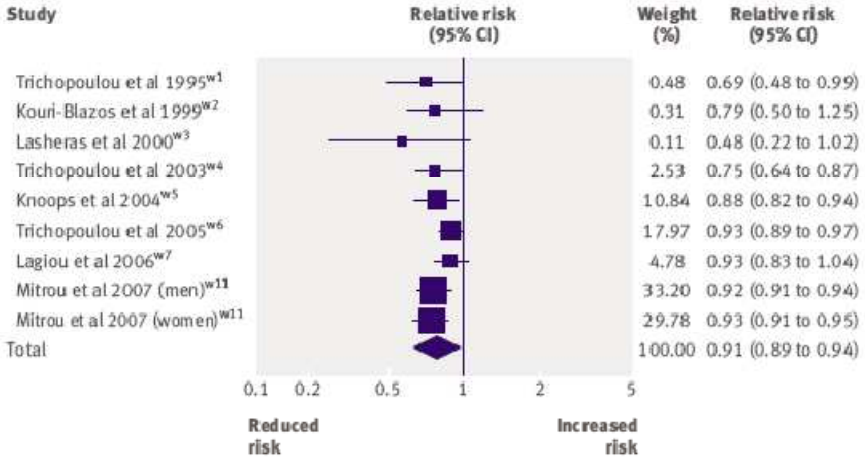


Fig 2| Risk of all cause mortality associated with two point increase in adherence score for Mediterranean diet. Squares represent effect size; extended lines show 95% confidence intervals; diamond represents total effect size

non-significance.

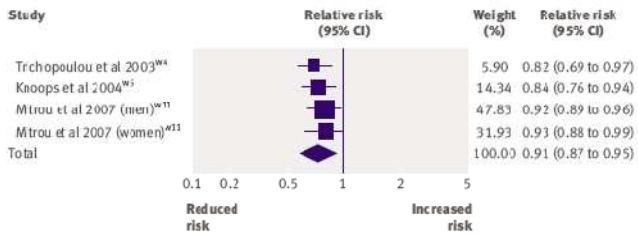


Fig 3| Risk of mortality from cardiovascular diseases associated with two point increase in adherence score for Mediterranean diet. Squares represent effect size; extended lines show 95% confidence intervals; diamond represents total effect size

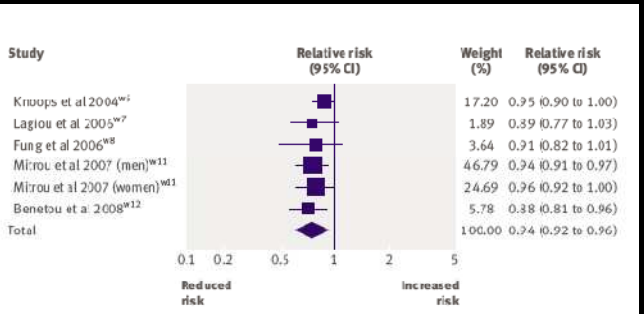


Fig 4| Risk of occurrence of or mortality from cancer associated with two point increase in adherence score for Mediterranean diet. Squares represent effect size; extended lines show 95% confidence intervals; diamond represents total effect size

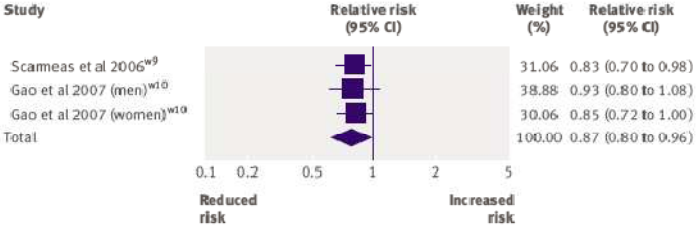


Fig 5| Risk of Parkinson's disease and Alzheimer's disease associated with two point increase in adherence score for Mediterranean diet. Squares represent effect size; extended lines show 95% confidence intervals; diamond represents total effect size

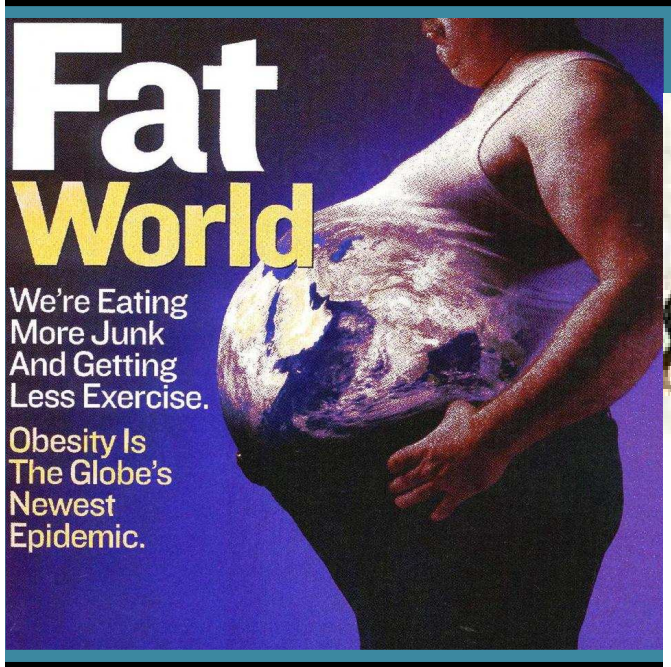
Indice di Adeguatezza Mediterraneo (IAM):

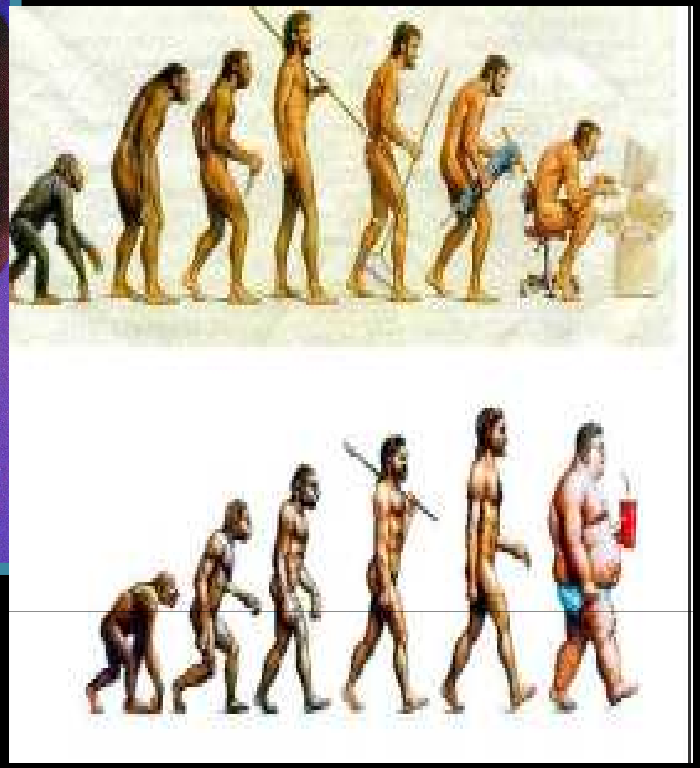
$$\text{IAM} = \frac{\%\ \text{energia da CARBOIDRATI (gr. 1)+PROTETTIVI (gr. 2)}}{\%\ \text{energia da DERIVATI ANIMALI (gr. 3)+DOLCI (gr. 4)}}$$

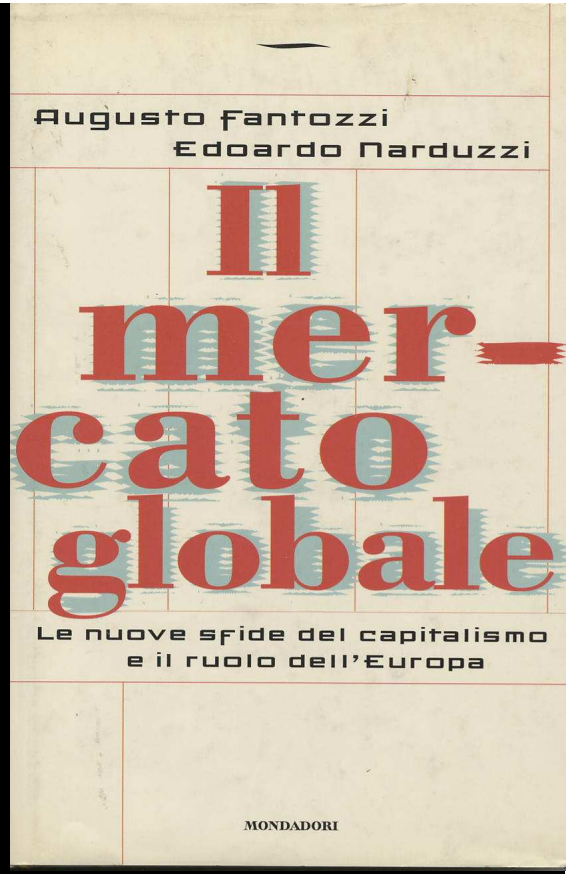
Carboidrati (gruppo1): ***pane, cereali, legumi, patate***
Protettivi (gruppo 2): ***vegetali, frutta, pesce, vino rosso, olio d'oliva***
(Gruppi di alimenti appartenenti alla dieta mediterranea)

Derivati animali (gruppo 3): ***latte, formaggio, carne, uova, grassi animali e margarina***
Dolci (gruppo 4): ***bevande dolci, biscotti/torte, zucchero***
(Gruppi di alimenti non appartenenti alla dieta mediterranea)

Alberti et all. Eur J Clin Nutr 1999


Fat
World
We're Eating
More Junk
And Getting
Less Exercise.
Obesity Is
The Globe's
Newest
Epidemic.




Augusto Fantozzi
Edoardo Narduzzi
Il mercato globale
Le nuove sfide del capitalismo e il ruolo dell'Europa
MONDADORI


McDonald's

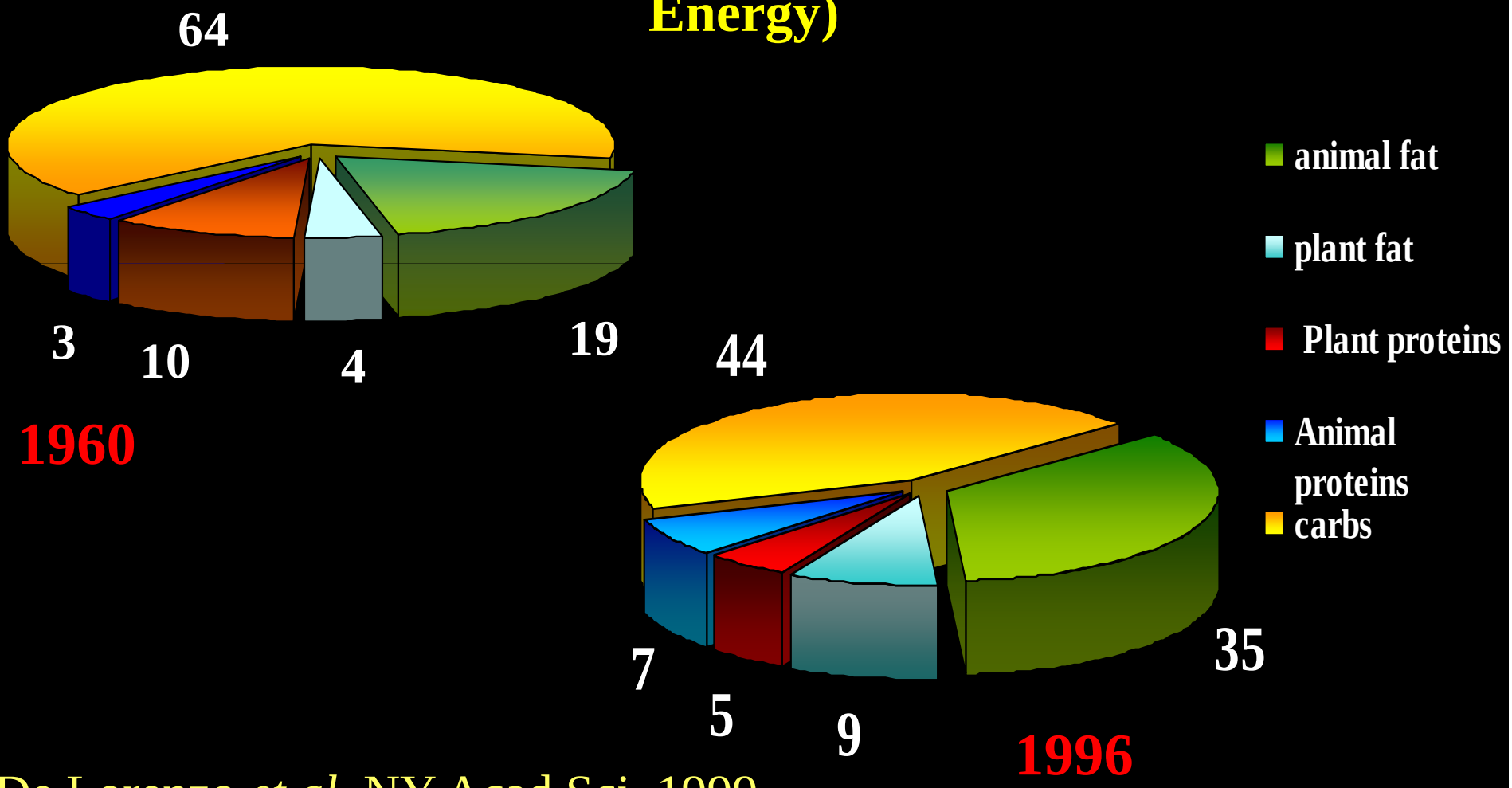






Human Nutrition Unit - University of Rome Tor Vergata

1960-1996: Daily Intake of Nutrients in Nicotera (% of Total Energy)



De Lorenzo *et al*, NY Acad Sci, 1999

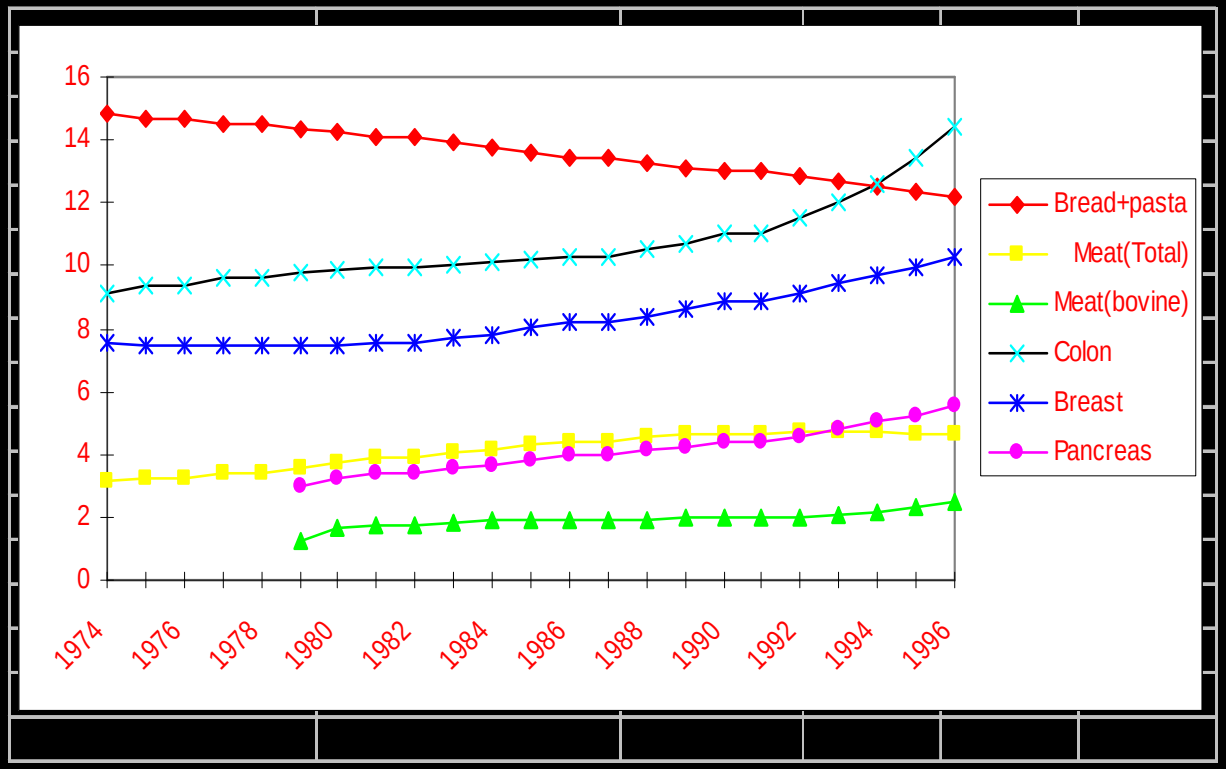
	Males	Females
Nicotera 1960	**9.4**	**11.4**
Nicotera 1996	**2.8**	**2.5**

A. De Lorenzo et all; Diab Nutr Met 2001

Tra maggio 2007 e dicembre 2008, 2.193 pazienti in età pediatrica e 4.245 adulti su tutto il territorio nazionale, sono stati analizzati utilizzando come indice di qualità della dieta il MAI, *Mediterranean Adequacy Index*. Il risultato è stato che meno del 20% della popolazione raggiunge un MAI pari o superiore a 2, ossia assume energia da alimenti della dieta mediterranea in misura almeno doppia a quella di altri alimenti, ed addirittura un italiano su quattro ha un indice di mediterraneità della dieta inferiore ad 1, ossia assume la maggior parte del suo apporto calorico da alimenti non mediterranei.

Prevenzione del cancro e dieta mediterranea

DIETA MEDITERRANEA



De Lorenzo et al. Ann. New York Academy Sci, 1999.

Healthy Eating Index

“Score” on the overall quality of diet
This “score” looks at the types and amounts of food

- **Aterogenicity Index (AI)**
- **Cholesterol satured fat index (CSI)**
- **Trombogenecity Index (TI)**
- **Mediterranean Adeguacy Index (MAI)**

Healthy Eating Index

- **Macronutrient percentage (%Fats; % Carbohydrates , %proteins, %fiber)**

- **Micronutrient (%vitams, %minerals)**





Indici nutrizionali di un pasto tipico americano.
Valore di 100g:

kcal	499
Proteine (g)	23.7
Lipidi (g)	15.5
Carboidrati (g)	78.7
INQ proteine	1.5
INQ carboidrati	1.0
INQ lipidi	1.0
CSI	7.6



Indici nutrizionali di un pasto tipico mediterraneo.
Valore di 100g:

kcal	532
Proteine (g)	7.24
Lipidi (g)	2.92
Carboidrati (g)	38.28
INQ proteine	1.21
INQ carboidrati	1.2
INQ lipidi	0.47
CSI	0.49

LA DIETA MEDITERRANEA è FUORI MODA?





“Pomodori e buoi dei paesi tuoi” di Beppe Grillo





Science & Technology

health. It doesn't require that you weigh your food or eat according to your blood type or astrological sign. As Willett likes to say, its ultimate message is simple: "Eat, drink and be healthy."

The main difference between the Healthy Eating Pyramid and the government's plan is its focus on individual foods. Willett is quick to break up groups of fats or carbohydrates or proteins to highlight the best and worst sources of those nutrients. That may seem an obvious distinction, but it's a critical departure from the USDA's recommendations. Instead of directing people to the best fats, the most wholesome carbohydrates and the most nutritious sources of protein, the USDA pyramid implies that all fats are dangerous and most carbs are safe. And if the past decade has taught us anything, it's that carbs can be as deadly as fats.

How did the U.S. government get it so wrong? Basically by trying too hard to simplify its message. Scientists have known since the 1960s that the saturated fat in red meat and dairy products can raise cholesterol levels and promote coronary heart disease. Though the USDA had long downplayed those risks to appease the cattle and dairy industries, it had also acknowledged them. When the USDA staff started building the Food Guide Pyramid in the late 1980s, its main objective was to get that message out. Earlier food charts had shown four basic groups—meat, dairy, produce and cereal grains—and encouraged people to eat everything in moderation. The pyramid introduced the notion that some foods (fats) required more moderation than others (carbohydrates).

Scientists were well aware that fats could be healthful and that carbs could cause harm. Studies had shown that unlike butter and lard, the oils found in fish,

The new diet is designed not for short-term weight loss but for lifelong health

who served as an adviser to the surgeon general in the late 1980s. "We never thought of Snackwell's."

It's not just the calories that make refined carbs so troublesome—it's the way they're digested. Unlike whole grains,

Newsweek, January 20th 2003

CORRIERE DELLA SERA.it

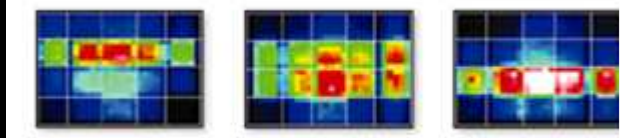


I nutrizionisti: più proteine nel piatto!!!

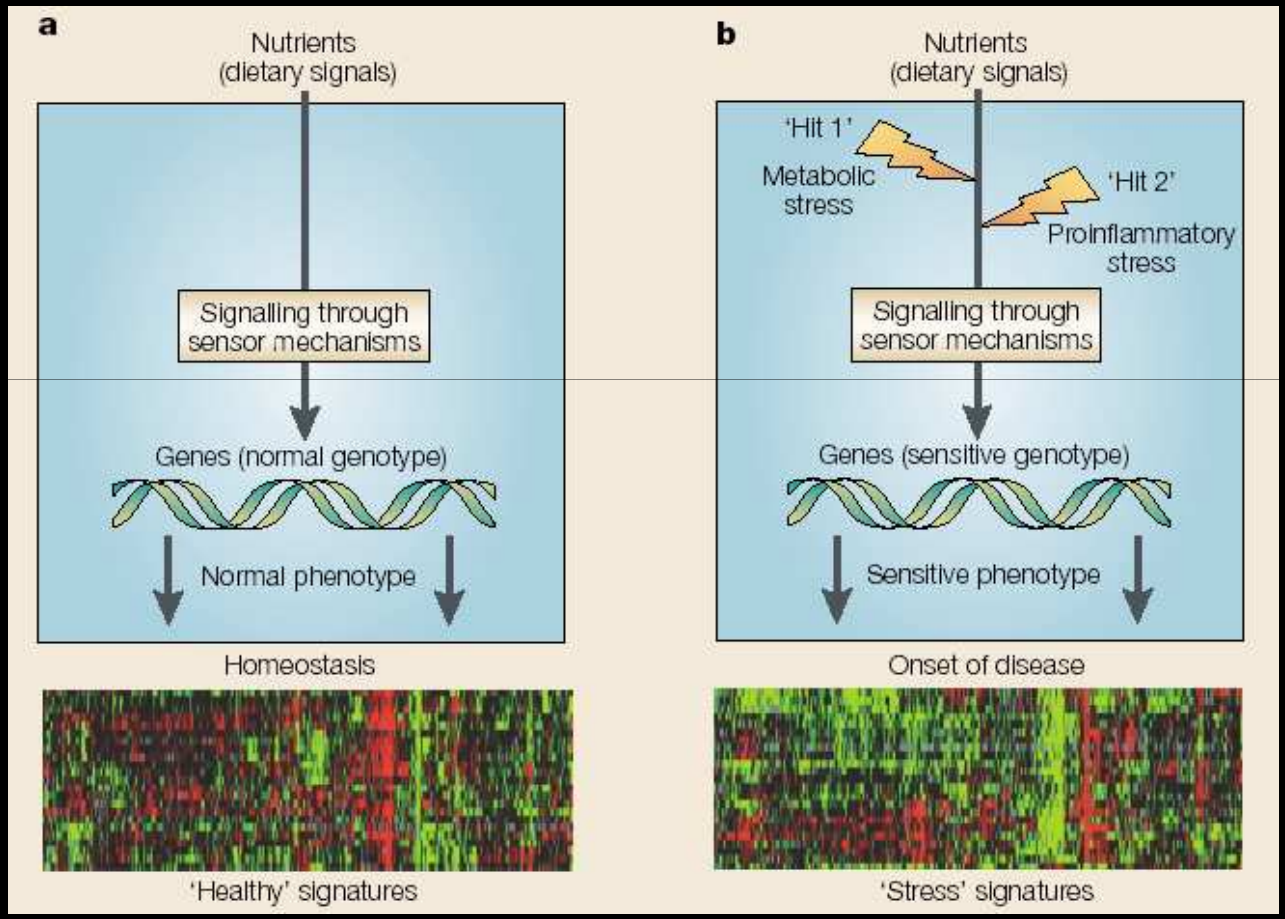
“Un ritocco alle nostre abitudini potrebbe aiutarci ad


Metabolismo
carcinogenesi
Segnali cellulari
Differenziamento
Nutriente
Ciclo cellualre
Apoptosi
nature
REVIEWS
GENETICS





La firma dietetica



Muller M et al. Nature Rev Genetics 2003;4:315-322

Components are “complex mixtures” - act synergistically







Dietary Component	% Reduction
➢ Wine (150 ml/day)	32%
➢ Fish (114 g 4x/week)	14%
➢ Dark Chocolate (100 g/day)	21%
➢ Fruits and Vegetables (400 g/day)	21%
➢ Garlic (2.7 g/day)	25%
➢ Almonds (68 g/day)	12%

76% decreased risk of CVD







Franco et al. BMJ 329:1447-1450, 2004

Cost-effectiveness of prevention for heart disease

Treatment	Cost per life year gained (£ sterling)
Aspirin	50
Thiazide (antihypertensive)	66
Mediterranean Diet	***290***
ACE Inhibitor (antihypertensive)	5634
Simvastatin (cholesterol lowering)	8240



Source: Ebrahim S, Davey-Smith G, McCabe C, Payne N, Pickin M, Sheldon TA et al. What role for statins? A review and Economic model. Health Technol Assess 1999;3:No (19)

FIC Federazione Italiana di Cardiologia
Italian Federation of Cardiology

Mediterranean diet and n-3 fatty acids in the prevention and treatment of cardiovascular disease

Michel de Lorgeril and Patricia Salen

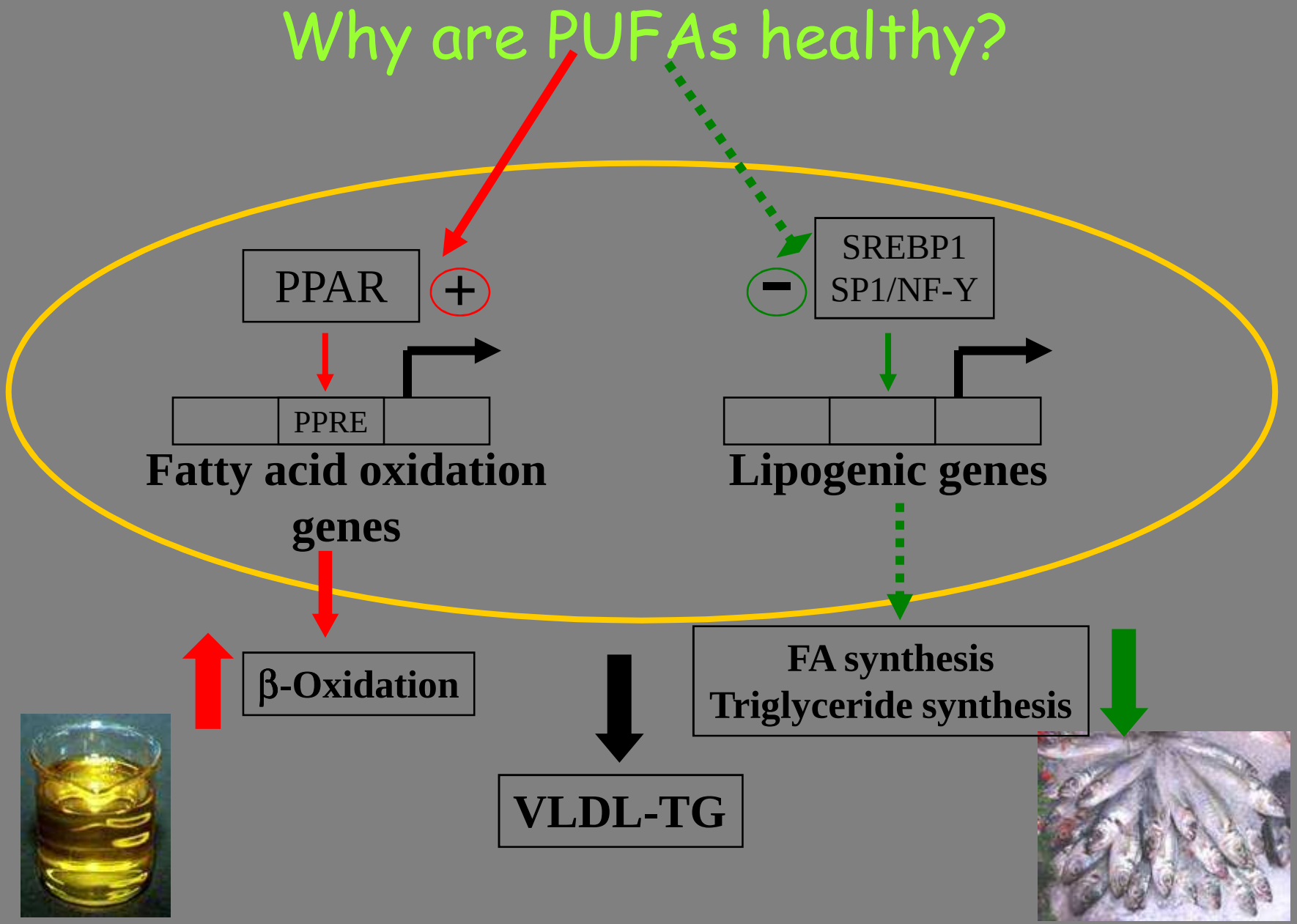
Consumption of a traditional Mediterranean diet and n-3 polyunsaturated fatty acids (PUFAs) was shown to be effective in reducing the complications of coronary heart disease in randomised controlled trials. Epidemiological studies and controlled trials indicate that plant- and sea-derived n-3 PUFAs are likely to be important mediators of the protection provided by traditional Mediterranean diets. Of note, consumption of marine n-3 PUFAs from fish and other seafood is high in certain Mediterranean countries (Spain, Portugal), but quite low in others (Italy, Greece). A relative insufficiency of dietary marine n-3 PUFAs among Italians might in part explain the results of the GISSI-Prevenzione trial, in which a modest supplementation of eicosapentaenoic acid + docosahexaenoic acid (~850 mg/day) produced striking reductions in coronary heart disease death (−30%) and sudden cardiac death (−45%) among patients with known heart disease. The protection provided by n-3 PUFAs from both plant and marine sources may be partly dependent on other dietary factors. Plant and marine n-3 PUFAs are likely to be major mediators of the protective effect provided by traditional Mediterranean diets.
J Cardiovasc Med 8 (suppl 1):S38–S41 © 2007 Italian Federation of Cardiology.

Table 3 2002 Fish supply (kg/year/capita) in different Mediterranean and non-Mediterranean countries according to FAO Food Balance Sheets

Japan	66
Norway	55
Spain	48
France	31
Italy	26
Greece	23
United Kingdom	23
United States	21

Based on FAO Food Balance Sheets of the World Health Organisation (http://faostat.fao.org).

PPARs are ligand activated transcription factors



J Pharmacol Sci **97**, 184 – 189 (2005)

Journal of Pharmacological Sciences
©2005 The Japanese Pharmacological Society

Forum Minireview

Nuclear Receptors as Targets for Drug Development: Crosstalk Between Peroxisome Proliferator-Activated Receptor γ and Cytokines in Bone Marrow-Derived Mesenchymal Stem Cells

Ichiro Takada[1,*], Miyuki Suzawa[1], and Shigeaki Kato[1]

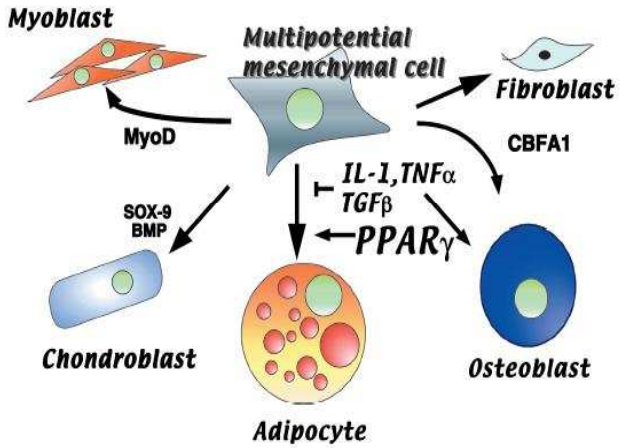
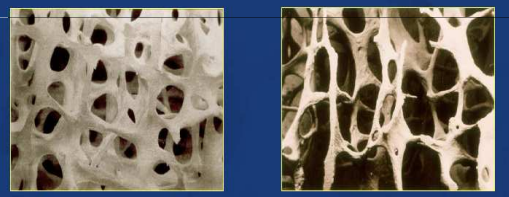


Fig. 1. Diagramatic depiction of bone marrow-derived mesenchymal stem cell differentiation paradigm and related signals. MyoD, myoblast determination; CBFA1, core binding factor alpha 1; SOX-9, SRY box-9; BMP, bone morphogenic protein; TGFβ, transforming growth factor-β.

L'osteoporosi è un disordine scheletrico caratterizzato da compromessa resistenza ossea che predispone l'individuo ad un aumentato rischio di frattura. La resistenza ossea riflette principalmente l'integrazione di densità ossea e qualità ossea.



Osso normale Osteoporosi

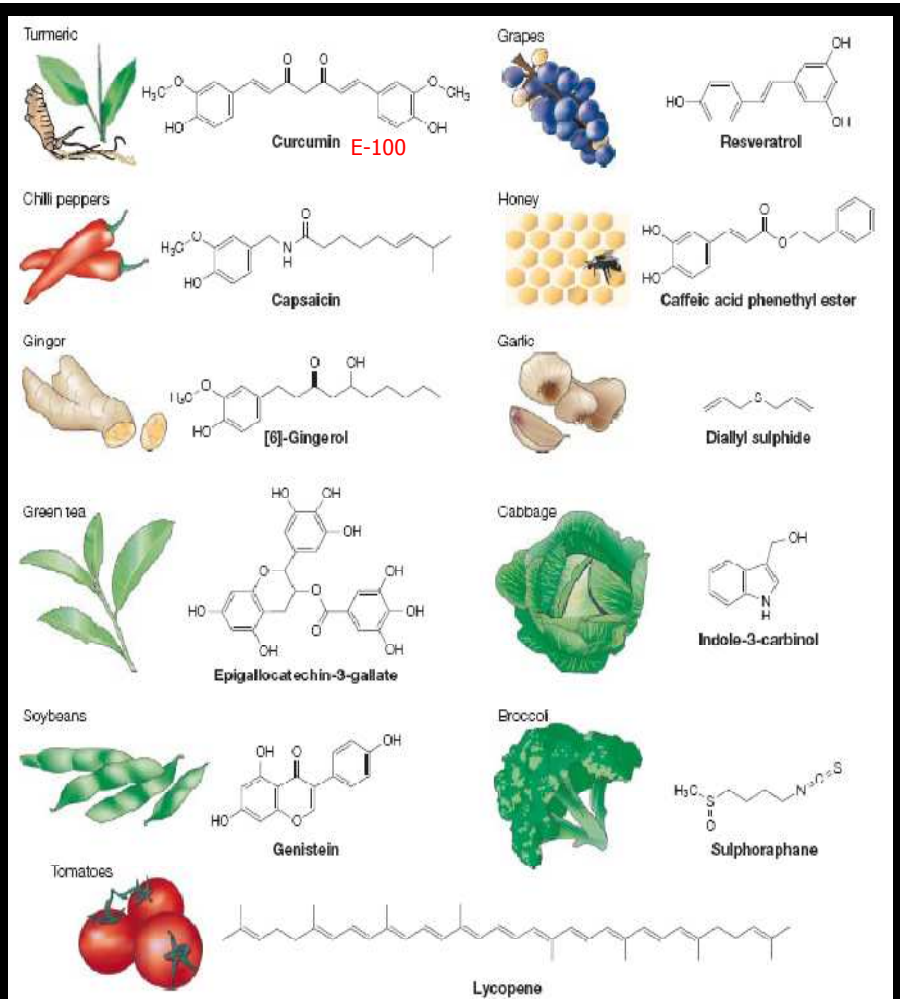
Our results indicate that suppression of PPARγ function by IL-1 or TNF-α leads to increased sensitivity of mesenchymal stem cells to other cytodifferentiation factors and to development of cell types other than adipocytes, such as osteoblasts and osteoclasts (27).

Public Health Nutrition: 9(8A), 1136–1140 DOI: 10.1017/S1368980007668530

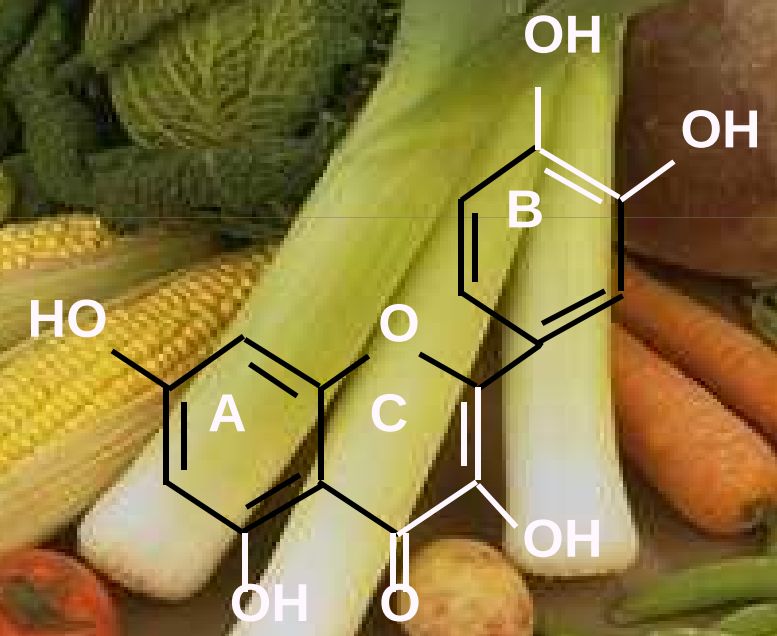
Importance of functional foods in the Mediterranean diet

RM Ortega*
Departamento de Nutrición, Facultad de Farmacia, Universidad Complutense, 28040-Madrid (Spain)

Submitted 18 April 2006: Accepted 26 November 2006



Phenolic Compounds



UNITA' ORAC

Figura 5 *Area sotto la curva di decadimento della beta-ficoeritrina (B-PE)*

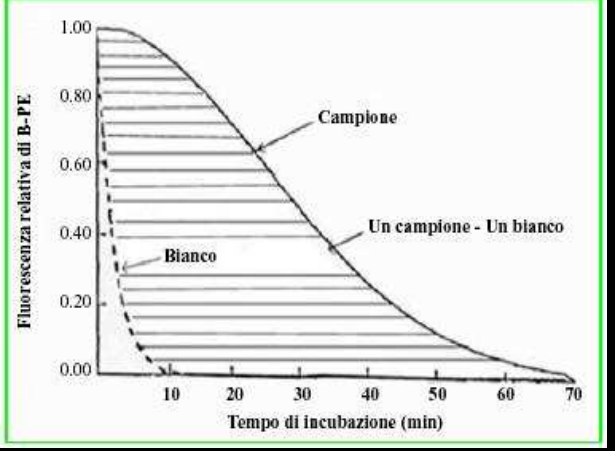


Figura 6 *Curve di calibrazione dello* standard *Trolox*

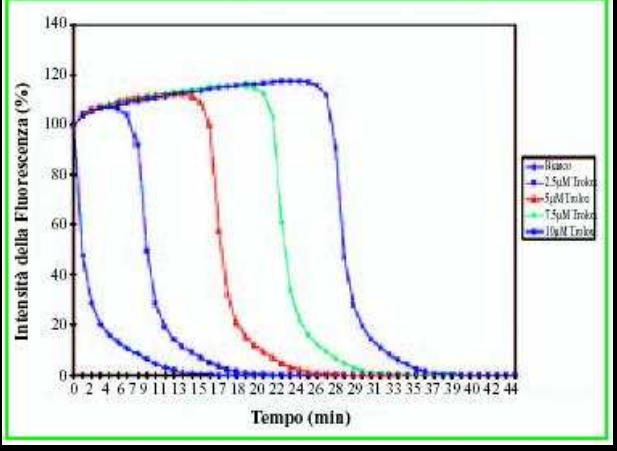


Tabella 3 *Alimenti che apportano fino a 500 unità ORAC per porzione*

Vegetali	*Quantità*	*Unità ORAC*
Cetrioli	1	36
Albicocche	3	72
Melone	3 fette	97
Pomodori	1	116
Spinaci crudi	1 piatto	182
Pera	1	222
Banana	1	223
Pesca	1	248
Mela	1	301
Melanzana	1	326
Uva bianca	1 grappolo	357
Cipolla	1	360
Uvetta nera	1 cucchiaio	396
Cavolfiore cotto	1 tazza	400
Fagiolini cotti	1 tazza	404
Patata americana	1	433
Kiwi	1	458

1 unità ORAC = 1 µM di equivalenti Trolox®

È stato stimato che ogni persona dovrebbe introdurre una quantità di vegetali pari a 5000 unità ORAC al giorno per godere pienamente dei benefici degli antiossidanti contenuti.

Allium cepa



Allium sativum



Salvia officinalis



Rosmarinus officinalis



Scientific Evidence: Hot Nature Food

Thermo-Effect

Zingerone (*Suekaw 1984*) and **Capsaicincids** (*kawada et al 1988*) promote adrenal medulla Catecholamine Secretion.

The capsaicin receptor- involves in the heat-activated ion channel in the pain pathway (*Caterina et al 1997*)



Capsaicinoids

zingerone

Tabella 8 *Valori di fenoli totali, flavonoidi, flavanoli e ORAC nelle erbe aromatiche analizzate*

		FENOLI TOTALI*		FLAVONOIDI*		FLAVANOLI*		ORAC*	
ERBE AROMATICHE	**NOME BOTANICO**	mg/100g ± DS		mg/100g ± DS		mg/100g ± DS		µmolTE/100g ± DS	
Erba cipollina	*Allium schoenoprasum*	74·9	8·9	35·3	3·1	1·10	0·10	2094·2	196
Aneto	*Anethum graveolens*	215·2	22·0	93·2	9·6	0·73	0·06	4392·1	403
Salvia	*Salvia officinalis*	798·0	81·0	749·5	71·0	1·61	0·17	32 004·1	3095
Santoreggia	*Santureja hortensis*	201·2	20·0	67·5	62·0	1·13	0·12	9645·2	871
Timo	*Thymus vulgaris*	1537·0	140·0	1165·3	100·0	0·22	0·02	27 425·5	2501
Issopo	*Hyssopus officinalis*	214·5	21·0	176·0	17·0	2·65	0·31	6050·2	600
Melissa	*Melissa officinalis*	434·0	40·0	289·0	26·0	1·91	0·21	5996·5	500
Maggiorana	*Origanum majorana*	854·2	83·0	812·6	82·0	2·71	0·26	27 297·4	2611
Origano	*Origanum vulgare*	435·1	41·0	361·0	31·0	1·14	0·12	13 970·2	1090
Prezzemolo	*Petroselium hortensis*	67·9	6·1	52·2	4·2	0·90	0·06	1301·8	131
Menta	*Mentha piperita*	611·2	60·0	592·5	49·0	4·33	0·39	13 978·1	1100
Rucola	*Eruca sativa*	136·4	12·0	46·0	6·2	1·42	0·13	2373·3	230
Rosmarino	*Rosmarinus officinalis*	1377·3	130·0	1321·2	131·0	2·41	0·21	290·32	2842
Basilico	*Ocymum basilicum*	234·0	28·0	230·0	20·0	0·93	0·09	4805·2	450
Dragoncello	*Artemisia dracunculus*	570·0	59·0	537·0	48·0	0·11	0·02	15 542·2	1296

* I valori sono riferiti a mg/100 g di vegetale fresco e sono le medie di deviazioni *standard* di 4 differenti determinazioni DS Deviazione *Standard*

Walnut: Brain Food (organ-specific)



Rich in Omega-3 PUFAS

Walnut extract inhibit the fibrillization of amyloid beta-protein, and also defibrillizes its preformed fibrils.

(Chauhan N et al., Curr Alzheimer Res 2004 1:183-8)

Tabella 9 *Valori di fenoli totali, flavonoidi totali e ORAC nelle spezie analizzate*

		FENOLI TOTALI*		TOTALE FLAVONOIDI*		ORAC*	
SPEZIE	**NOME BOTANICO**	mg/100g ± DS		mg/100g ± DS		µmolTE/100g ± DS	
Cumino	*Cuminum cyminum*	750·0	69	740·1	76·0	76 800·2	7500
Cardamomo	*Elettaria cardamomum*	148·3	15	19·3	2·3	2764·0	254
Coriandolo	*Coriandrum sativum*	134·2	14	94·6	9·2	5141·3	531
Zenzero fresco	*Zingiber officinalis*	200·5	19	117·5	12·0	14 840·2	1060

* I valori sono riferiti a mg/100 g di spezia e sono le medie di deviazioni *standard* di 4 differenti determinazioni DS Deviazione *Standard*



Adherence to the Mediterranean diet is associated with total antioxidant capacity in healthy adults: the ATTICA study[1–3]

Christos Pitsavos, Demosthenes B Panagiotakos, Natalia Tzima, Christina Chrysohoou, Manolis Economou, Antonis Zampelas, and Christodoulos Stefanadis

TABLE 2
Frequency consumption of several food groups, according to Mediterranean diet score[1]

	Tertile of diet score						
	Men (n = 1514)			Women (n = 1528)			
Food groups	1st (0–20) (n = 504)	2nd (21–35) (n = 505)	3rd (36–55) (n = 505)	1st (0–20) (n = 509)	2nd (21–35) (n = 509)	3rd (36–55) (n = 510)	P[2]
Red meat and red meat products (servings/wk)	3.0 ± 1.1[3]	1.6 ± 1.9[4]	1.1 ± 1.8[4]	2.5 ± 1.1	1.7 ± 1.2[4]	0.9 ± 1.1[4]	0.02
Poultry (servings/wk)	1.7 ± 1.1	1.4 ± 0.6	0.8 ± 0.9	1.3 ± 0.5	1.3 ± 0.7	1.0 ± 0.4	0.44
Sweets (servings/wk)	1.0 ± 1.4	1.1 ± 1.3	1.2 ± 1.2	1.1 ± 1.9	1.2 ± 1.6	1.3 ± 1.9	0.33
Fish (servings/wk)	1.0 ± 1.1	1.3 ± 2.1	1.6 ± 2.2	1.0 ± 1.3	1.3 ± 2.0	1.9 ± 1.4	0.87
Dairy products, low fat (servings/wk)	4.1 ± 2.2	5.9 ± 2.2	6.2 ± 2.4[5]	5.0 ± 1.3	6.2 ± 1.1[4]	6.9 ± 2.1[5]	0.001
Fruit (servings/wk)	5.0 ± 3.1	5.3 ± 2.9	7.1 ± 2.2[5]	5.0 ± 3.2	5.7 ± 2.1[4]	7.0 ± 2.1[5]	0.03
Vegetables (servings/wk)	1.4 ± 1.4	1.9 ± 1.2[4]	2.4 ± 1.5[5]	1.2 ± 1.1	2.3 ± 1.2[4]	3.1 ± 1.2[4]	0.01
Legumes (servings/wk)	1.3 ± 1.1	1.8 ± 1.2[4]	2.1 ± 1.1[4]	0.9 ± 1.5	1.3 ± 1.4	1.7 ± 0.7[4]	0.03
Potatoes (servings/wk)	1.7 ± 1.4	1.9 ± 1.6[4]	2.1 ± 1.3[4]	1.9 ± 1.5	2.7 ± 1.4[4]	2.9 ± 1.1[4]	0.03
Nonrefined cereals (servings/wk)	1.2 ± 1.5	1.8 ± 1.3	2.4 ± 1.4	1.2 ± 1.4	1.7 ± 1.5	2.2 ± 1.2	0.12
Alcoholic beverages (mL/d)	160 ± 44	115 ± 35[4]	95 ± 25[5]	85 ± 30	80 ± 25[4]	75 ± 45[5]	0.001
Daily use of olive oil (%)	77	86	91	79	88	95	0.001

[1] No significant interactions were observed between tertile of diet score and sex.
[2] Derived from ANOVA. Reflect the association between food consumption and tertiles of diet score, after adjustment for sex.
[3] $\bar{x}$ ± SD (all such values).
[4,5] Significantly different from [illegible] ([4] P < 0.05, [5] P < 0.01).

Olive Oils High in Phenolic Compounds Modulate Oxidative/Antioxidative Status in Men[1]

Tanja Weinbrenner,* Montserrat Fitó,* Rafael de la Torre,†‡ Guillermo T. Saez,†† Philip Rijken,‡‡ Carmen Tormos,†† Stefan Coolen,‡‡ Magí Farré Albaladejo,†** Sergio Abanades,** Helmut Schroder,* Jaume Marrugat,* ** and Maria-Isabel Covas*[2]

*Lipids and Cardiovascular Epidemiology Unit and †Pharmacology Research Unit, Institut Municipal d'Investigació Mèdica, Barcelona, Spain; **Universitat Autònoma de Barcelona, Barcelona, Spain; ‡Universitat Pompeu Fabra, Barcelona, Spain; ††Department of Biochemistry and Molecular Biology, Facultad de Medicina, Universidad de Valencia, Valencia, Spain; and ‡‡Unilever Health Institute, Vlaardingen, The Netherlands

ABSTRACT The aim of the present study was to evaluate whether olive oils high in phenolic compounds influence the oxidative/antioxidative status in humans. Healthy men (n = 12) participated in a double-blind, randomized, crossover study in which 3 olive oils with low (LPC), moderate (MPC), and high (HPC) phenolic content were given as raw doses (25 mL/d) for 4 consecutive days preceded by 10-d washout periods. Volunteers followed a strict very low-antioxidant diet the 3 d before and during the intervention periods. Short-term consumption of olive oils decreased plasma oxidized LDL (oxLDL), 8-oxo-dG in mitochondrial DNA and urine, malondialdehyde in urine (P < 0.05 for linear trend), and increased HDL cholesterol and glutathione peroxidase activity (P < 0.05 for linear trend), in a dose-dependent manner with the phenolic content of the olive oil administered. At d 4, oxLDL after MPC and HPC, and 8-oxo-dG after HPC administration (25 mL, respectively), were reduced when the men were in the postprandial state (P < 0.05). Phenolic compounds in plasma increased dose dependently during this stage with the phenolic content of the olive oils at 1, 2, 4, and 6 h, respectively (P < 0.01). Their concentrations increased in plasma and urine samples in a dose-dependent manner after short-term consumption of the olive oils (P < 0.01). In conclusion, the olive oil phenolic content modulated the oxidative/antioxidative status of healthy men who consumed a very low-antioxidant diet. J. Nutr. 134: 2314–2321, 2004.

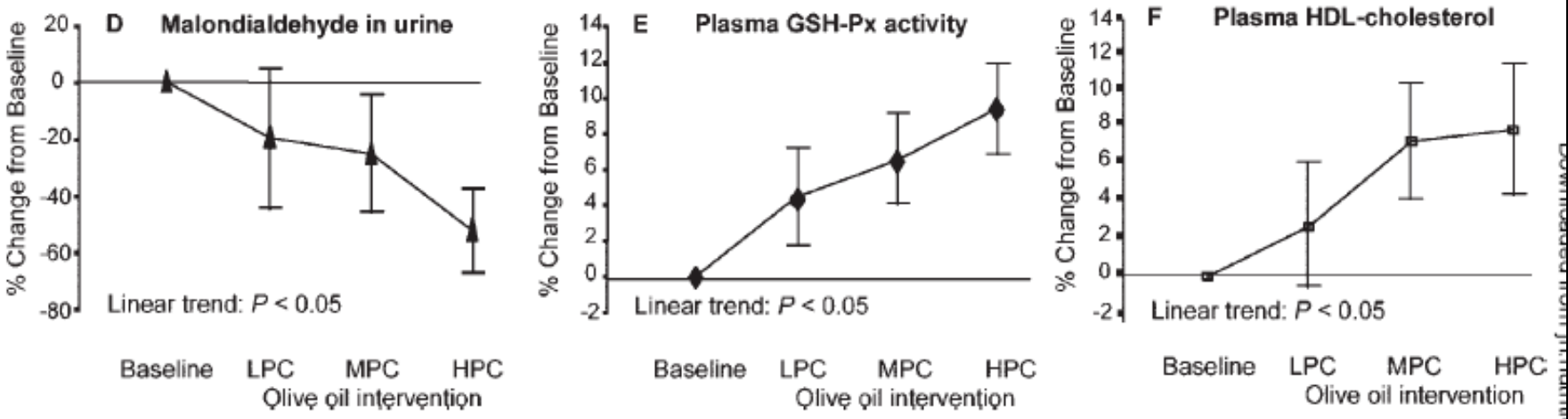


FIGURE 1 The percentage change in plasma oxidized LDL (*A*), 8-oxo-dG in mitDNA (*B*), and urine (*C*), malondialdehyde in urine (*D*), plasma GSH-Px activity (*E*), and serum HDL-C (*F*) in men after 4 d of sustained consumption of olive oil with low (LPC), moderate (MPC), and high (HPC) phenolic content. Values are means ± SEM, n = 12.

Ibuprofen- like activity in extra-virgin olive oil

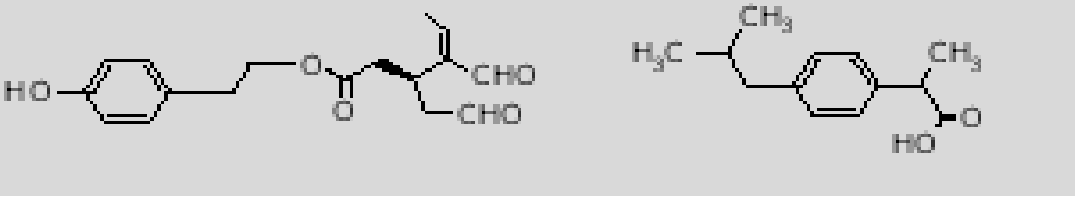


Figure 1 | Structures of (−)oleocanthal (left) and the anti-inflammatory drug ibuprofen (right). How they underpin the similar throat-irritating and pharmacological properties of the two compounds is unclear as yet.

-Newly pressed extra-virgin olive oil contains oleocanthal, a compound whose pungency induces a strong stinging sensation in the throat as FANS

- 50g of extra-virgin olive oil contain 200 µg/ml of oleocanthal

- this dose is corresponding to 10% of ibuprofen dosage recommended for adult pain relief

Adherence to the Mediterranean Diet Is Inversely Associated With Circulating Interleukin-6 Among Middle-Aged Men

A Twin Study

Jun Dai, MD, MSc; Andrew H. Miller, MD; J. Douglas Bremner, MD; Jack Goldberg, PhD; Linda Jones, BS; Lucy Shallenberger, MPH; Rocky Buckham, BS; Nancy V. Murrah, RN, BSN; Emir Veledar, PhD; Peter W. Wilson, MD; Viola Vaccarino, MD, PhD

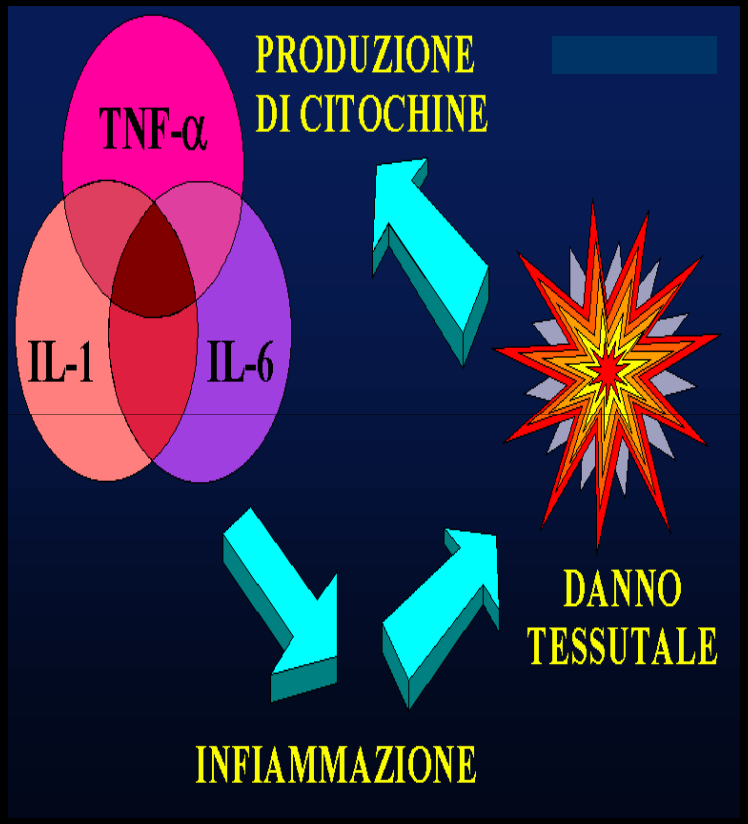


Table 1. Age, Lifestyle, and Clinical and Biochemical Characteristics of Subjects According to the MDS

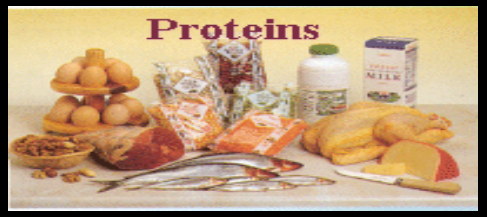
	MDS				
Variable	0–3 (n=104)	4 (n=70)	5 (n=81)	6–9 (n=90)	P*
Age, y	53.8±0.3	54.3±0.3	54.5±0.3	54.8±0.3	0.02
Education, y	13.8±0.2	14.1±0.2	14.7±0.2	14.5±0.2	0.003
Body mass index, kg/m^2	29.6±0.5	29.5±0.6	29.5±0.5	28.5±0.5	0.13
Waist-to-hip ratio	0.94±0.01	0.95±0.01	0.95±0.01	0.94±0.01	0.75
Physical activity, unit	7.15±0.16	7.34±0.19	7.69±0.18	7.49±0.17	0.07
Smoking status, n (%)					0.001
Former	29 (27.9)	24 (34.3)	33 (40.7)	44 (48.9)	
Current	41 (39.4)	34 (48.6)	13 (16.0)	9 (10.0)	
Never	34 (32.7)	12 (17.1)	35 (43.2)	37 (41.1)	
Married, n (%)	77 (74.0)	54 (77.1)	66 (81.5)	77 (85.6)	0.07
Employed, n (%)	78 (75.0)	58 (82.9)	64 (79.0)	74 (82.2)	0.28
Depressive symptoms, BDI score	6.04±0.62	4.44±0.74	4.15±0.70	3.98±0.67	0.02
Plasma glucose, mg/dL	98.2±1.8	102.7±2.1	100.0±2.0	103.3±1.9	0.052
Systolic blood pressure, mm Hg	130.3±1.6	129.5±1.8	128.5±1.7	129.3±1.6	0.61
Diastolic blood pressure, mm Hg	80.8±1.1	80.6±1.2	79.8±1.2	82.3±1.1	0.37
Blood lipids, mg/dL					
Total triglycerides	176.6±10.0	192.9±11.6	179.2±11.6	182.5±10.5	0.75
Total cholesterol	185.3±3.7	193.2±4.4	186.0±4.2	189.1±4.0	0.57
HDL cholesterol	38.9±0.9	38.4±1.0	39.7±1.0	37.7±1.0	0.41
LDL cholesterol	124.0±3.3	125.9±3.9	120.8±3.7	125.0±3.5	0.96
Previous coronary heart disease, n (%)	13 (12.5)	2 (2.9)	12 (14.8)	6 (6.7)	0.31
Diabetes mellitus, n (%)	8 (7.7)	8 (11.6)	11 (13.6)	10 (11.1)	0.35
Hypertension, n (%)	36 (34.6)	21 (30.0)	24 (29.7)	26 (28.9)	0.40
Use of fish oil supplements, n (%)	2 (1.9)	2 (2.9)	5 (6.2)	10 (11.1)	0.01
Use of statins, n (%)	26 (25.0)	11 (15.7)	27 (33.3)	22 (24.4)	0.79
Use of aspirin, n (%)	29 (27.9)	12 (17.1)	25 (30.9)	21 (23.3)	0.67
Plasma inflammatory biomarkers					
IL-6, pg/mL†	2.1 (1.8–2.3)	1.9 (1.6–2.2)	1.8 (1.6–2.1)	1.5 (1.3–1.7)	<0.0001
hsCRP, mg/L†	1.4 (1.1–1.7)	1.3 (1.0–1.7)	1.1 (0.9–1.4)	1.0 (0.8–1.3)	0.02

BDI indicates Beck Depression Inventory; HDL, high-density lipoprotein; and LDL, low-density lipoprotein. Results are expressed as mean±SEM when appropriate. Variables (%) are dichotomous except smoking status.

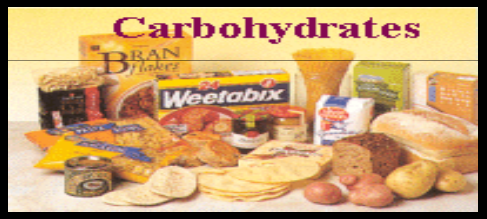
*Test for trend across diet groups. All probability values are corrected for pair clustering. Mixed models were used for continuous variables, generalized estimating equation logistic models for dichotomous variables, and repeated proportional odds model with generalized estimating equation for the 3-level ordinal smoking variable.

†Geometric means (95% CIs).

Ambiente “obesogeno”





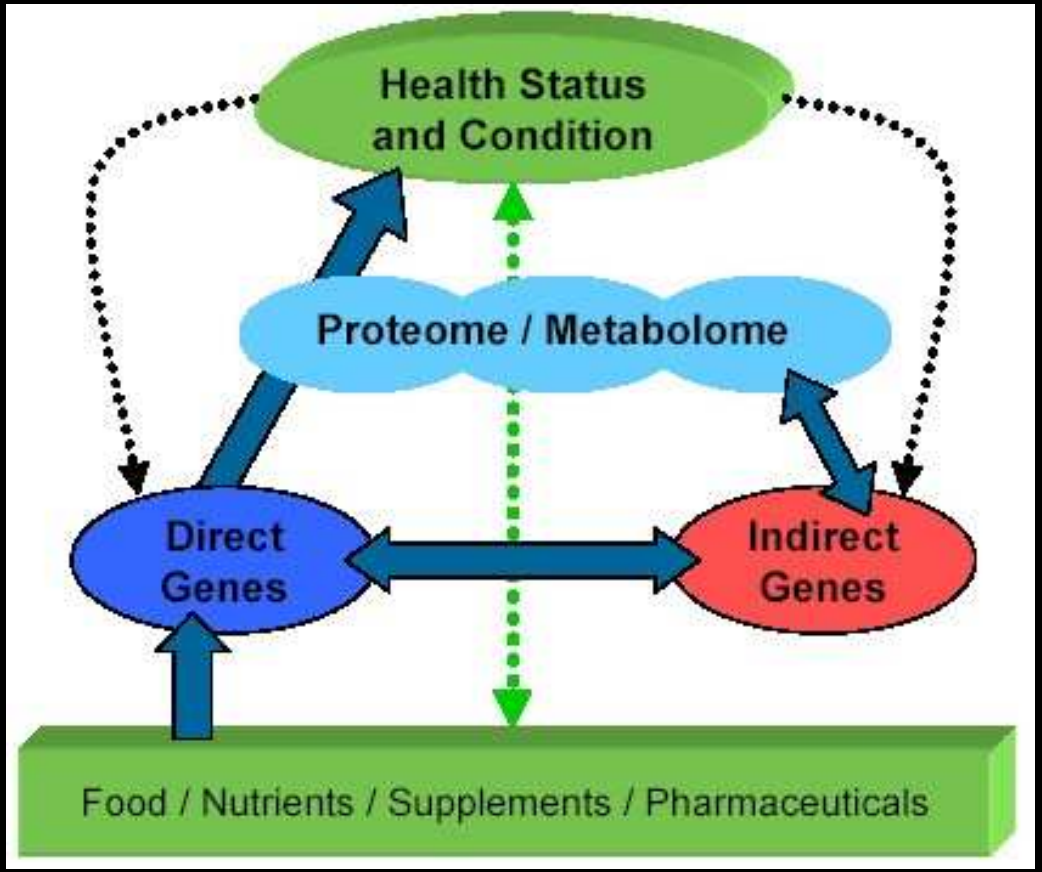


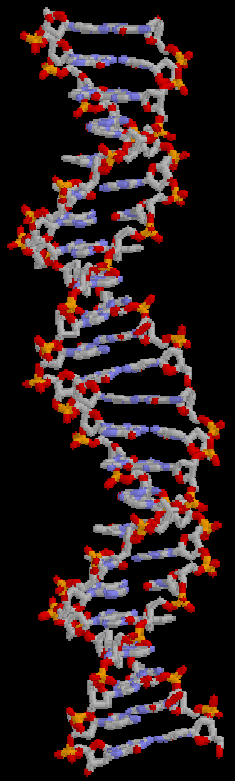
LE CAUSE DELL'OBESITÀ

- GENETICHE
- AMBIENTALI









European Journal of Clinical Nutrition (2007), 1–6
© 2007 Nature Publishing Group All rights reserved
0954-3007/07 $30.00
www.nature.com/ejcn

ORIGINAL ARTICLE

Effect of a moderately hypoenergetic Mediterranean diet and exercise program on body cell mass and cardiovascular risk factors in obese women

A Andreoli[1], S Lauro[2], N Di Daniele[3], R Sorge[4], M Celi[3] and SL Volpe[5]

Table 1 Breakdown of the components of the moderately hypoenergetic Mediterranean diet

	Breakfast	*Snack*	*Lunch*	*Snack*	*Dinner*
kcal	197.3±26.5	83.7±7.5	656.7±24.9	99.7±28.4	466.0±15.5
MJ	0.83±0.11	0.35±0.03	2.75±0.1	0.42±0.12	1.95±0.06
Total carbohydrate (g)	32.4±4.2	17.8±0.3	88.4±11.1	25.4±7.7	51.7±0.4
Total protein (g)	7.9±0.7	2.2±0.3	36.1±1.4	0.92±0.1	28.3±2.3
Total fat (g)	4.7±1.1	0.87±0.57	20.3±7.3	0.24±0.25	18.3±1.2
Saturated fat (g)	1.7±0.6	0.08±0.003	4.6±2.3	0.04±0.02	3.1±0.2
Polyunsaturated fat (g)	0.8±0.4	0.6±0.2	2.3±0.7	0.5±0.1	2.9±0.3
Monounsaturated (g)	0.9±0.07	0.05±0.01	9±0.5	0.05±0.01	7±0.1
Total cholesterol (mg)	12.4±6.6	—	33.3±27.7	—	28.3±5.8
Total fiber (g)	1.4±0.8	3.7±1.1	11.7±1.2	5.3±3.5	10.7±3.1

Values represent mean±s.d.

Use of quality control indexes in Moderately hypocaloric Mediterranean Diets for treatment of obesity

Table 1: Antropometric and body composition parameters before and after MHD.

	bseline	2-mounths MHD	statistial significance
Weight, Kg	84.70 ± 9.56	78.1 ± 10.53	p<0.0001
BMI , Kg/m2	33.05 ± 2.61	31.18 ± 2.74	p<0.0001
Waist, mm	104.19 ± 7.6	99.85 ± 9.4	p<0.0001
Hip, mm	116.63 ± 7.95	110.50 ± 7.01	p<0.0001
WHR	0.92 ± 0.08	0.88 ± 0.07	p<0.001
FMTOT, Kg	39.619 ± 6360	37.010 ± 12899	p<0.0001
FMLEG, Kg	10.472 ± 3519	9.081± 3439	p<0.0001
FMTRN, Kg	18.214 ± 2955	17.540 ± 6505	p<0.0001
LBMTOT, Kg	40.847± 5061	40.155 ± 4837	NS
LBMLEG, Kg	17.149 ± 5175	16.653 ± 5135	NS
LBMTRN, Kg	20.253 ± 2309	19.213 ± 2257	NS
BMD, g/cm2	1.2364 ± 0.122	1.2431 ± 0.123	NS
BMC, Kg	2.362 ± 331	2.340 ± 335	NS
FATABD, Kg	3.927± 643	2.447 ± 615	p<0.0001
LEANABD, Kg	3.945 ± 605	3.858 ± 596	NS
RMR kcal	1531 ±152	1497 ±123	NS

Values are expressed as mean ± SD
Statistical analysis was performed using un-paired *student's t-test*.

A. De Lorenzo et all; Diab Nutr Met 14(3); 121-5; 2001

Table 1: Antropometric and body composition parameters before and after MHD.

	bseline	2-mounths MHD	statistial significance
Weight, Kg	84.70 ± 9.56	78.1 ± 10.53	p<0.0001
BMI , Kg/m2	33.05 ± 2.61	31.18 ± 2.74	p<0.0001
Waist, mm	104.19 ± 7.6	99.85 ± 9.4	p<0.0001
Hip, mm	116.63 ± 7.95	110.50 ± 7.01	p<0.0001
WHR	0.92 ± 0.08	0.88 ± 0.07	p<0.001
FMTOT, Kg	39.619 ± 6360	37.010 ± 12899	p<0.0001
FMLEG, Kg	10.472 ± 3519	9.081± 3439	p<0.0001
FMTRN, Kg	18.214 ± 2955	17.540 ± 6505	p<0.0001
LBMTOT, Kg	40.847± 5061	40.155 ± 4837	NS
LBMLEG, Kg	17.149 ± 5175	16.653 ± 5135	NS
LBMTRN, Kg	20.253 ± 2309	19.213 ± 2257	NS
BMD, g/cm2	1.2364 ± 0.122	1.2431 ± 0.123	NS
BMC, Kg	2.362 ± 331	2.340 ± 335	NS
FATABD, Kg	3.927± 643	2.447 ± 615	p<0.0001
LEANABD, Kg	3.945 ± 605	3.858 ± 596	NS
RMR kcal	1531 ±152	1497 ±123	NS

Values are expressed as mean ± SD
Statistical analysis was performed using un-paired *student's t-test*.

A. De Lorenzo et all; Diab Nutr Met 14(3); 121-5; 2001

Metabolically Healthy Obese (MHO)



Low Visceral Fat
High BMI
High Fat mass
High Insulin Sensitivity
High HDL
Low Triglycerides

"At Risk" Obese



High Visceral Fat
High BMI
High Fat mass
Low Insulin Sensitivity
Low HDL
High Triglycerides

Metabolically Obese Normal Weight (MONW)



High Visceral Fat
Low BMI
High Fat mass
Low Lean Body Mass
Low Insulin Sensitivity
High Liver Fat
High Triglycerides

Metabolically Healthy



Low Visceral Fat
Low BMI
Low Fat mass
High Lean Body Mass
High Insulin Sensitivity
Low Liver Fat
Low Triglycerides

Effect of a Mediterranean-Style Diet on Endothelial Dysfunction and Markers of Vascular Inflammation in the Metabolic Syndrome

A Randomized Trial

Katherine Esposito, MD
Raffaele Marfella, MD, PhD
Miryam Ciotola, MD
Carmen Di Palo, MD
Francesco Giugliano, MD
Giovanni Giugliano, MD
Massimo D'Armiento, MD
Francesco D'Andrea, MD
Dario Giugliano, MD, PhD

Context The metabolic syndrome has been identified as a target for dietary therapies to reduce risk of cardiovascular disease; however, the role of diet in the etiology of the metabolic syndrome is poorly understood.

Objective To assess the effect of a Mediterranean-style diet on endothelial function and vascular inflammatory markers in patients with the metabolic syndrome.

Design, Setting, and Patients Randomized, single-blind trial conducted from June 2001 to January 2004 at a university hospital in Italy among 180 patients (99 men and 81 women) with the metabolic syndrome, as defined by the Adult Treatment Panel III.

Interventions Patients in the intervention group (n=90) were instructed to follow a Mediterranean-style diet and received detailed advice about how to increase daily consumption of whole grains, fruits, vegetables, nuts, and olive oil; patients in the control group (n=90) followed a prudent diet (carbohydrates, 50%-60%; proteins, 15%-20%; total fat, <30%).

Main Outcome Measures Nutrient intake; endothelial function score as a measure of blood pressure and platelet aggregation response to L-arginine; lipid and glucose parameters; insulin sensitivity; and circulating levels of high-sensitivity C-reactive protein (hs-CRP) and interleukins 6 (IL-6), 7 (IL-7), and 18 (IL-18).

Results After 2 years, patients following the Mediterranean-style diet consumed more foods rich in monounsaturated fat, polyunsaturated fat, and fiber and had a lower ratio of omega-6 to omega-3 fatty acids. Total fruit, vegetable, and nuts intake (274 g/d), whole grain intake (103 g/d), and olive oil consumption (8 g/d) were also significantly higher in the intervention group ($P<.001$). The level of physical activity increased in both groups by approximately 60%, without difference between groups ($P=.22$). Mean (SD) body weight decreased more in patients in the intervention group (−4.0 [1.1] kg) than in those in the control group (−1.2 [0.6] kg) ($P<.001$). Compared with patients consuming the control diet, patients consuming the intervention diet had significantly reduced serum concentrations of hs-CRP ($P=.01$), IL-6 ($P=.04$), IL-7 ($P=0.4$), and IL-18 ($P=0.3$), as well as decreased insulin resistance ($P<.001$). Endothelial function score improved in the intervention group (mean [SD] change, +1.9 [0.6]; $P<.001$) but remained stable in the control group (−0.2 [0.2]; $P=.33$). At 2 years of follow-up, 40 patients in the intervention group still had features of the metabolic syndrome, compared with 78 patients in the control group ($P<.001$).

Conclusion A Mediterranean-style diet might be effective in reducing the prevalence of the metabolic syndrome and its associated cardiovascular risk.

JAMA. 2004;292:1440-1446 www.jama.com

THE METABOLIC SYNDROME consists of a constellation of factors that increase the risk of cardiovascular disease and type 2 diabetes. Recent estimates indicate that the metabolic syndrome is highly prevalent in the United States, with an estimated 24% of the adult population affected.[1] Its clinical identification is based on measures of abdominal obesity, atherogenic dyslipidemia, elevated blood pressure, and glucose intolerance.[2] The etiology of this syndrome is largely unknown but presumably represents a complex interaction between genetic, metabolic, and environmental factors including diet.[3,4] Several recent studies also suggest that a proinflammatory state is one component of the metabolic syndrome.[5-8] Moreover, evidence has accumulated indicating that low-grade inflammation is associated with endothelial dysfunction.[9,10]

Table 1. Characteristics of the Study Participants

Characteristics	Mean (SD) Intervention Diet (n = 90)	Mean (SD) Control Diet (n = 90)	*P* Value
Sex, No. (%) Men	49 (54)	50 (56)	.70
Age, y	44.3 (6.4)	43.5 (5.9)	.56
No. of components of the metabolic syndrome, No. (%)			
3	74 (82)	76 (84)	.34
4	18 (20)	16 (18)	
5	8 (9)	8 (9)	
Body weight, kg	78 (8)	77 (8)	.36
Body mass index*	27.9 (3.4)	28.1 (3.2)	.55
Waist circumference, cm	92 (9)	93 (10)	.62
Plasma glucose, mg/dL	113 (10)	114 (10)	.43
Serum insulin, μU/mL	15 (6)	16 (7)	.15
HOMA score	3.7 (0.7)	3.8 (0.7)	.18
Serum lipids, mg/dL			
Total cholesterol	199 (34)	193 (32)	.18
HDL-C	41 (9)	42 (9)	.35
Triglycerides	168 (57)	172 (54)	.24
Blood pressure, mm Hg			
Systolic	134 (9)	136 (10)	.11
Diastolic	85 (6)	86 (7)	.21
Endothelial function score	6.0 (1.2)	5.9 (1.1)	.13
hs-CRP and cytokines, median (IQR)			
hs-CRP, mg/L	2.8 (0.7-5.4)	2.9 (0.5-5.7)	.25
IL-6, pg/mL	2.1 (0.5-4.8)	1.9 (0.5-4.7)	.14
IL-7, pg/mL	2.4 (0.6-5.9)	2.6 (0.7-6.0)	.12
IL-18, pg/mL	167 (102-232)	175 (104-238)	.10

Abbreviations: HDL-C, high-density lipoprotein cholesterol; HOMA, homeostatic model assessment; hs-CRP, high-sensitivity C-reactive protein; IL, interleukin; IQR, interquartile range.
SI conversion factors: To convert glucose to mmol/L, multiply values by 0.0555; to convert insulin to pmol/L, multiply values by 7.715; to convert total cholesterol and HDL-C to mmol/L, multiply values by 0.0259; to convert triglycerides to mmol/L, multiply values by 0.0113.
*Calculated as weight in kilograms divided by the square of height in meters.

ELSEVIER

Nutrition, Metabolism & Cardiovascular Diseases

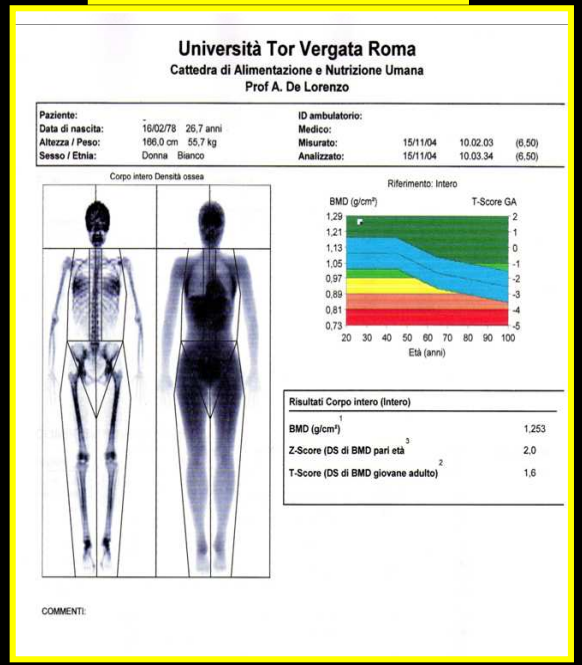
www.elsevier.com/locate/nmcd

Normal weight obese (NWO) women: An evaluation of a candidate new syndrome

A. De Lorenzo [a,b,*], R. Martinoli [a], F. Vaia [c], L. Di Renzo [a]

[a] Division of Human Nutrition, University of Tor Vergata, Via Montpellier 1, I-00133 Rome, Italy
[b] Nova Salus Foundation, Rome, Italy
[c] S. Eugenio Hospital, Viale dell'Umanesimo, Rome, Italy

Received 21 April 2005; received in revised form 10 August 2005; accepted 17 October 2005



Università Tor Vergata Roma
Cattedra di Alimentazione e Nutrizione Umana
Prof A. De Lorenzo

Paziente:	-		ID ambulatorio:		
Data di nascita:	16/02/78	26,7 anni	Medico:		
Altezza / Peso:	166,0 cm	55,7 kg	Misurato:	15/11/04 10.02.03	(6,50)
Sesso / Etnia:	Donna	Bianco	Analizzato:	15/11/04 10.03.34	(6,50)

Corpo intero Densità ossea

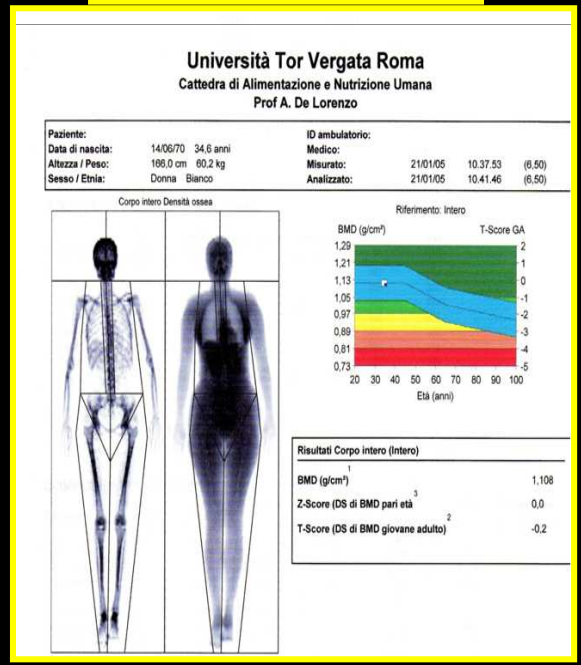
Riferimento: Intero

BMD (g/cm²) / T-Score GA

Età (anni)

Risultati Corpo intero (Intero)	
BMD (g/cm²) [1]	1,253
Z-Score (DS di BMD pari età [3]	2,0
T-Score (DS di BMD giovane adulto) [2]	1,6

COMMENTI:



Università Tor Vergata Roma
Cattedra di Alimentazione e Nutrizione Umana
Prof A. De Lorenzo

Paziente:			ID ambulatorio:		
Data di nascita:	14/06/70	34,6 anni	Medico:		
Altezza / Peso:	166,0 cm	60,2 kg	Misurato:	21/01/05 10.37.53	(6,50)
Sesso / Etnia:	Donna	Bianco	Analizzato:	21/01/05 10.41.46	(6,50)

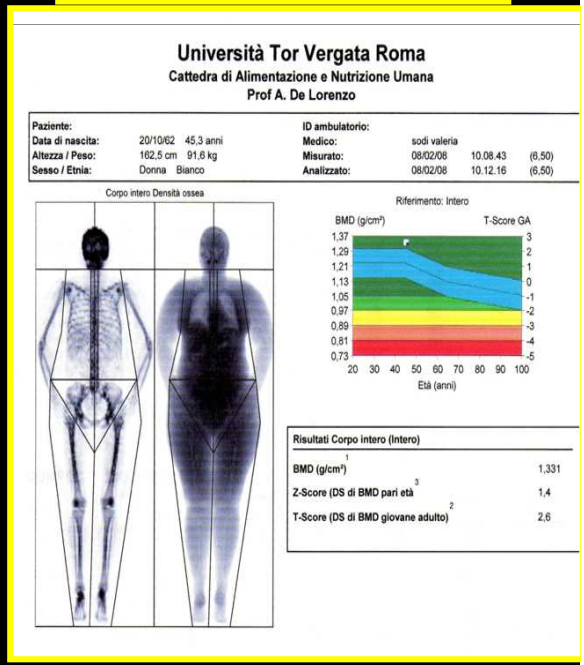
Corpo intero Densità ossea

Riferimento: Intero

BMD (g/cm²) / T-Score GA

Età (anni)

Risultati Corpo intero (Intero)	
BMD (g/cm²) [1]	1,108
Z-Score (DS di BMD pari età [3]	0,0
T-Score (DS di BMD giovane adulto) [2]	-0,2



Università Tor Vergata Roma
Cattedra di Alimentazione e Nutrizione Umana
Prof A. De Lorenzo

Paziente:			ID ambulatorio:		
Data di nascita:	20/10/62	45,3 anni	Medico:	sodi valeria	
Altezza / Peso:	162,5 cm	91,6 kg	Misurato:	08/02/06 10.08.43	(6,50)
Sesso / Etnia:	Donna	Bianco	Analizzato:	08/02/06 10.12.16	(6,50)

Corpo intero Densità ossea

Riferimento: Intero

BMD (g/cm²) / T-Score GA

Età (anni)

Risultati Corpo intero (Intero)	
BMD (g/cm²) [1]	1,331
Z-Score (DS di BMD pari età [3]	1,4
T-Score (DS di BMD giovane adulto) [2]	2,6

Normal-weight obese syndrome: early inflammation?[1–3]

Antonino De Lorenzo, Vera Del Gobbo, Maria Grazia Premrov, Mario Bigioni, Fabio Galvano, and Laura Di Renzo

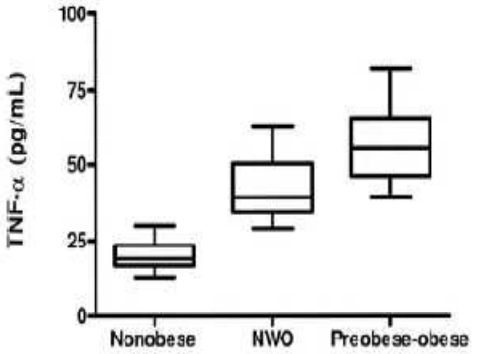


FIGURE 1. Plasma tumor necrosis factor α (TNF-α) concentrations in nonobese (n = 20), normal-weight obese (NWO; n = 20), and preobese-obese (n = 20) women. The plasma concentration was measured in duplicate by using the multiplex sandwich enzyme-linked immunosorbent assay (SearchLight Human Inflammatory Cytokine Array; Endogen, Perbio, IL). The lower limit of detection for the assay was 1.6 pg/mL. Differences between groups were assessed by using Tukey's test. Nonobese compared with NWO: $P < 0.001$; nonobese compared with preobese-obese: $P < 0.001$; NWO compared with preobese-obese: NS.

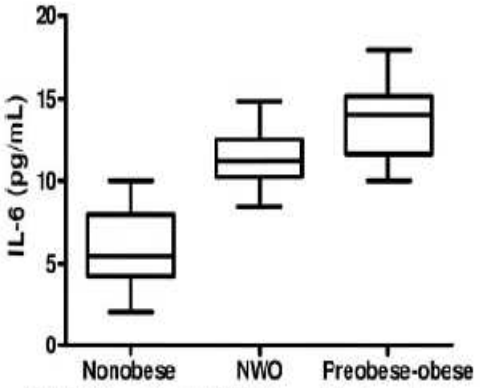


FIGURE 2. Plasma interleukin 6 (IL-6) concentrations in nonobese (n = 20), normal-weight obese (NWO; n = 20), and preobese-obese (n = 20) women. The plasma concentration was measured in duplicate by using the multiplex sandwich enzyme-linked immunosorbent assay (SearchLight Human Inflammatory Cytokine Array; Endogen, Perbio, IL). The lower limit of detection for the assay was 0.2 pg/mL. Differences between groups were assessed by using Tukey's test. Nonobese compared with NWO $P < 0.001$; nonobese compared with preobese-obese: $P < 0.001$; NWO compared with preobese-obese: NS.

Cytokine	*Control*	*NWO*	*Preobese-Obese*
IL-1 α	14.8 ± 1.8[a]	26.9 ± 4.5[b]	29.8 ± 5.3[b]
IL-1 β	5.0 ± 2.6[a]	15.0 ± 3.1[b]	19.0 ± 4.1[b]
IL-2	12.3 ± 1.5[a]	14.7 ± 3.6[a]	16.6 ± 3.9[a]
IL-6	5.950 ± 2.28[a]	11.42 ±1.77 [b]	13.68 ± 2.29[b]
IL-8	0.9 ± 0.2[a]	2.39 ± 0.62[b]	2.0 ± 0.7[b]
IL-10	3.4 ± 0.8[a]	3.83 ± 1.3[a]	4.7 ± 1.9[a]
IL-12p70	14.2 ± 2.2[a]	19.1 ± 3.7[a]	32.96 ± 4.6[b]
TNF α	20.10 ± 4.95[a]	42.77 ± 10.54[b]	56.37 ± 11.77[b]
INF- γ	17.7 ± 4.8[a]	25.3 ± 5.3[a]	39.93 ± 6.1[b]

Am J Clin Nutr 2007;85:40–5. Printed in USA. © 2007 American Society for Nutrition



ELSEVIER

Pharmacological Research 55 (2007) 131–138

Pharmacological
research

www.elsevier.com/locate/yphrs

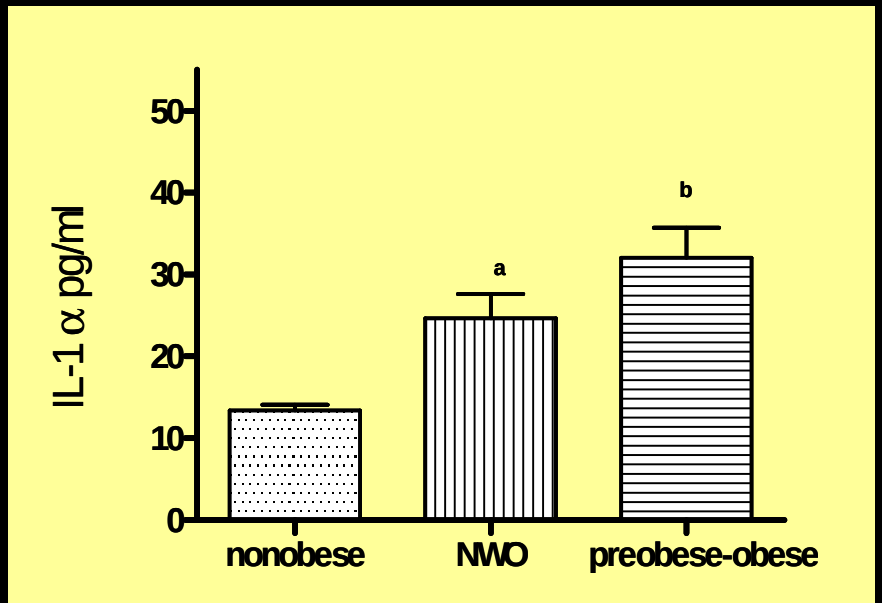
Interleukin-1 (IL-1) receptor antagonist gene polymorphism in normal weight obese syndrome: Relationship to body composition and IL-1 α and β plasma levels

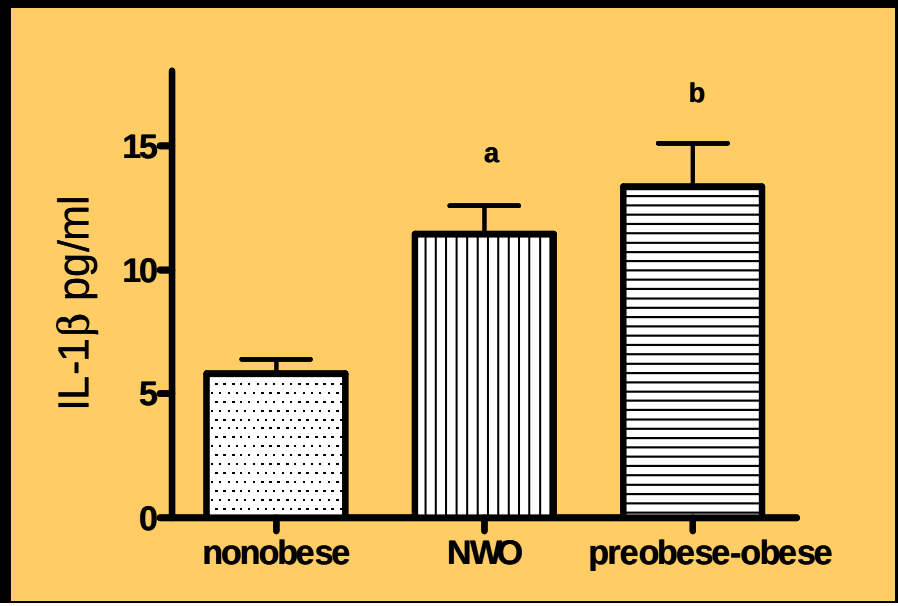
Laura Di Renzo[a,b,1], Mario Bigioni[a,2], Vera Del Gobbo[c,3], Maria Grazia Premrov[c,4], Ugo Barbini[a,5], Nicola Di Lorenzo[d,e], Antonino De Lorenzo[a,b,*]

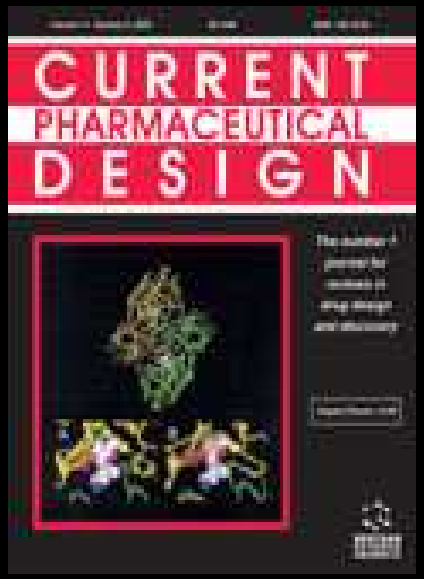
[a] *Department of Neuroscience, Division of Human Nutrition., University of Tor Vergata, Via Montpellier 1, 00133 Rome, Italy*
[b] *I.N.Di.M, National Institute for Mediterranean Diet and Nutrigenomic, Reggio Calabria, Italy*
[c] *Department of Experimental Medicine and Biochemical Sciences, Division of Immunology, University of Tor Vergata, Via Montpellier 1, 00133 Rome, Italy*
[d] *Division of General Surgery, University of Tor Vergata, Via Montpellier 1, 00133 Rome, Italy*
[e] *Fondazione Salus-Onlus, Via Roma 75/A, 67059 Trasacco (Aq), Italy*

Accepted 12 November 2006

author copy



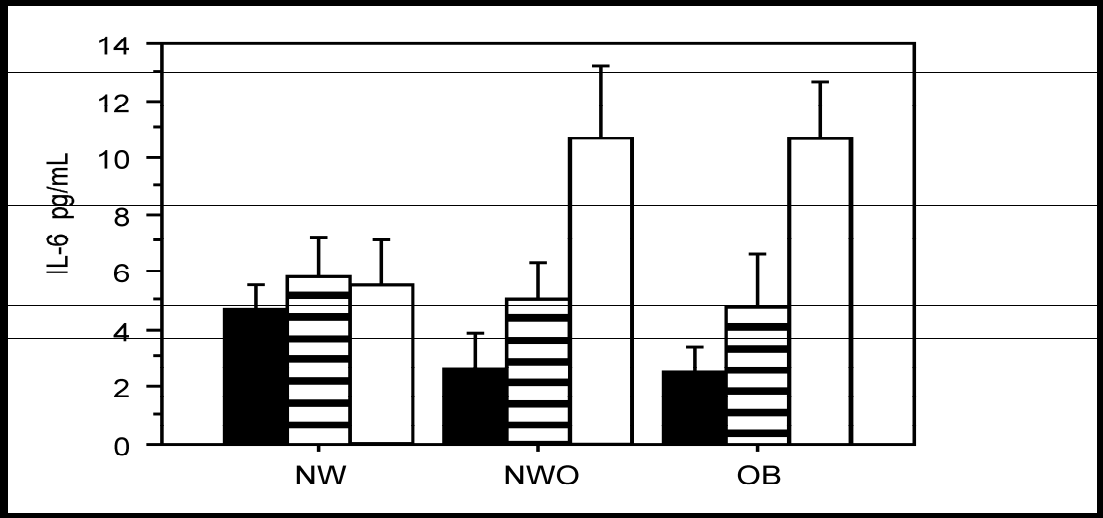


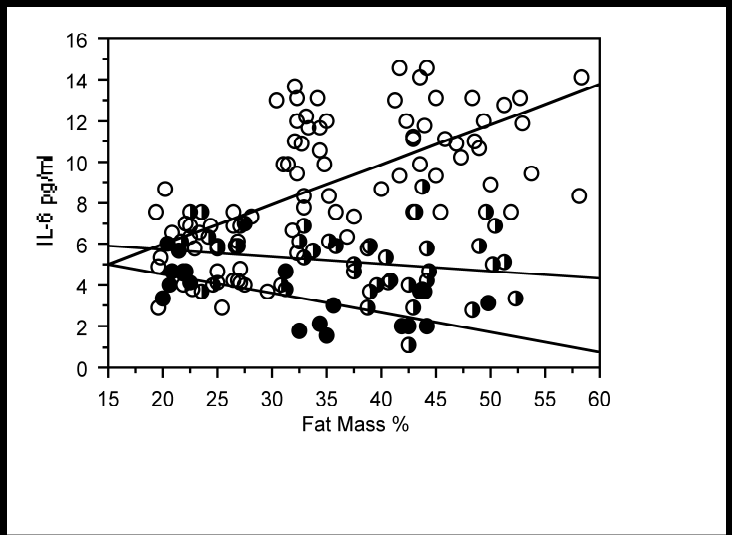


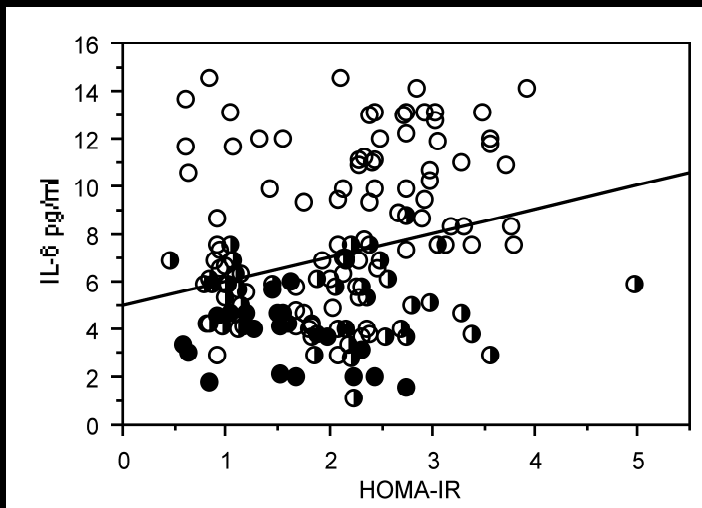
Current Pharmaceutical Design, 2008, *14*, 2699-2706

Body Composition and -174G/C Interleukin-6 Promoter Gene Polymorphism: Association with Progression of Insulin Resistance in Normal Weight Obese Syndrome

L. Di Renzo[1,4], A. Bertoli[2], M. Bigioni[1], V. Del Gobbo[3], M.G. Premrov[3], V. Calabrese[5], N. Di Daniele[2], A. De Lorenzo[1,4,*]







Available online at www.sciencedirect.com
ScienceDirect
Metabolism Clinical and Experimental
Metabolism Clinical and Experimental 58 (2009) 351–354
www.metabolismjournal.com

A study of acid phosphatase locus 1 in women with high fat content and normal body mass index

Antonino De Lorenzo[a], Laura Di Renzo[a], Alberto Puja[b], Patrizia Saccucci[c], Fulvia Gloria-Bottini[d,*], Egidio Bottini[d]

[a]Department of Neurosciences, Human Nutrition Unit, University of Rome Tor Vergata, 00133 Rome, Italy
[b]Dentistry Department, University of Rome Tor Vergata, 00133 Rome, Italy
[c]Department of Internal Medicine, University of Rome Tor Vergata, 00133 Rome, Italy
[d]Department of Biopathology and Imaging Diagnostics, University of Rome Tor Vergata, 00133 Rome, Italy

Received 7 February 2008; accepted 13 October 2008

Table 2
F and S isozyme concentrations in relation to the ACP_1 genotype

Total quantity of F (μg/mL RBC)		Total quantity of S (μg/mL RBC)		F/S ratio	
*B/*B	16.4	*C/*C	20.6	*B/*B	4.2
*B/*A	12.0	*C/*A	12.7	*B/*A	3.6
*C/*B	11.3	*C/*B	12.1	*A/*A	2.4
*A/*A	7.9	*B/*B	3.9	*C/*B	0.9
*C/*A	7.5	*B/*A	3.4	*C/*A	0.6
*C/*C	5.7	*A/*A	3.3	*C/*C	0.3

The quantities of enzyme are given per milliliter of packed red cells [12]. RBC indicates red blood cells.

Table 3
Distribution of ACP_1 genotypes in HFNB, HFHB, and healthy adults from the white population of Rome

ACP_1 genotype	HFNB	HFHB	Healthy adults
*A/*A	22.5%	8.5%	8.6%
*B/*B	41.7%	37.2%	43.9%
*B/*A	22.2%	45.7%	31.6%
*C/*A	5.6%	4.3%	3.4%
*C/*B	8.3%	4.3%	12.2%
Total n	36	94	416

Table 6
The ACP_1 isoforms in HFNB, HFHB, and controls carrying the $ACP_1^*A/*A$ and *B/*A genotypes

	F isoform		S isoform		F/S ratio	
	Mean	SE	Mean	SE	Mean	SE
A	9.88	0.37	3.34	0.009	2.94	0.10
B	11.45	0.21	3.39	0.005	3.38	0.06
C	11.03	0.13	3.37	0.003	3.26	0.04
t Test for difference between means						
A vs B	$P = .001$		$P = .001$		$P = .001$	
A vs C	$P = .002$		$P = .002$		$P = .003$	
B vs C	$P = .125$		$P = .002$		$P = .125$	

A indicates HFNB; B, HFHB; C, healthy adults.

Table 5
Odds ratio analysis

	OR	95% Confidence interval
$ACP_1^*A/*A$ vs other ACP_1 types		
A vs controls	3.01	1.17-7.58
B vs controls	0.98	0.40-2.29
A vs B	3.07	0.94-10.10
$ACP_1^*B/*A$ vs other ACP_1 types		
A vs controls	0.61	0.25-1.45
B vs controls	1.81	1.12-2.93
A vs B	0.33	0.13-0.88

OR indicates odds ratio; A, HFNB; B, HFHB.

Rispetto ai controlli

Per le donne *A/*A il rischio di diventare NWO è 3.01 (O.R.)

Per le donne *B/*A il rischio di diventare OB è 1.81(O.R.)

European Review for Medical and Pharmacological Sciences 2006; 10: 235-245

Normal Weight Obese syndrome: role of single nucleotide polymorphism of IL-15Rα and MTHFR 677C→T genes in the relationship between body composition and resting metabolic rate

L. DI RENZO[ab], M. BIGIONI[a], F.G. BOTTINI[a], V. DEL GOBBO[d], M.G. PREMROV[d], R. CIANCI[ae], A. DE LORENZO[abf]

Table II. Genotypes frequency of MTHFR 677C→T variant in the studied population.

	Genotypes frequency (%)		
	CC	CT	TT
Females			
F_1	16.7	79.1	4.2
F_2	16.9	54.3	28.8
Males	20.0	60.0	20.0

Chi square test of independence: CC vs CT vs TT genotypes, (P) < 0.04; TT vs other genotypes (P) < 0.02. Categories: F_1 = NWO females with BMI ≤ 25 kg/m² and FM > 30%; F_2 = female nonobese with a BMI ≤ 25 kg/m² and FM ≤ 30%, and preobese-obese individuals with BMI ≥ 25 kg/m² and FM ≥ 30%. Males: all males subjects nonobese and obese. None of the males subject was recorded with a value of BMI ≤ 25 kg/m² and FM > 30%.

Table III. Genotypes frequency of IL-15Rα IVS-5 variant in the studied population.

	Genotypes frequency (%)		
	AA	AG	GG
Females			
F_1	34.3	51.4	14.3
F_2	23.5	39.7	36.8
Males	16.0	36.0	48.0

Chi square test of independence: AA vs AG vs GG genotypes, (P) < 0.06; GG vs other genotypes (P) < 0.02. Categories: F_1 = NWO females with BMI ≤ 25 kg/m² and FM > 30%; F_2 = female nonobese with a BMI ≤ 25 kg/m² and FM ≤ 30%, and preobese-obese individuals with BMI ≥ 25 kg/m² and FM ≥ 30%. Males: all males subjects nonobese and obese. None of the males subject was recorded with a value of BMI ≤ 25 kg/m² and FM > 30%.

	Function
Tissue	0.192
%TBW	-0.445
VO_2	0.827
VCO_2	-0.186
RMR	1.232
MTHFR (TT)	0.504
IL-15Rα IVS 5 (GG)	0.343
Age	0.051

Independent variables: body, respiratory and polymorphic parameters. Dependent variable SEX, RMR, %FM. Categories: F_1 = NWO females with BMI ≤ 25 kg/m² and FM > 30%; F_2 = female nonobese with a BMI ≤ 25 kg/mm² and FM ≤ 30%, and preobese-obese incividuals with BMI ≥ 25 kg/m2 and FM ≥ 30%. Males: all males subject nonobese and obese. None of the males subject was recorded with a value of BMI ≤ 25 kg/mm² and FM > 30%. Parameters: age, Tissue = tissue body composition, W = waist and H = hip circumferences, RMR = resting metabolic rate, %TRW = percent of total body water, VO_2 = volume of oxygen consumption and VCO_2 = volume of carbon dioxide production, MTHFR and IL-15 IVS 5 genotypes TT and GG respectively.
Summary of Canonical Discriminant Functions

Function	Eigen value	% of variance	Canonical correlation	χ^2	df	p
1	0.252	100	0.45	16.620	8	< 0.03

This study suggests that body fat distribution, RMR, %TBW amount and single nucleotide polymorphism of IL-15Rα IVS-5 and MTHFR 677C→T mutations are associated to distinguish NWO women from controls with a normal metabolic profiles and obese individuals.

Normal Weight Obesity – A Risk Factor for Cardiometabolic Dysregulation and Cardiovascular Mortality

Abel Romero-Corral MD, MSc *, Virend K. Somers, MD, PhD *, Justo Sierra-Johnson, MD, MSc * and †, Simona Boarin, MD * and §, Yoel Korenfeld, MD *, Josef Korinek, MD *, Michael D. Jensen, MD ‡, Gianfranco Parati, MD § and Francisco Lopez-Jimenez, MD, MSc *

Table 3 Total and cardiovascular mortality in men and women with a normal BMI by body fat tertiles

MEN (N=3,042)	BF <18.65%	BF ≥18.65–23.15%	BF ≥23.15%
Total mortality events, n=470 (%)	137 (6.60)	143 (8.15)	190 (10.81)
Hazard ratio Model 1	Reference	0.87 (0.59-1.27)	0.90 (0.63-1.27)
Model 2		0.92 (0.63-1.34)	0.99 (0.67-1.45)
Cardiovascular mortality events, n=195 (%)	56 (2.13)	66 (3.71)	73 (4.44)
Hazard ratio Model 1		1.12 (0.65-1.91)	1.07 (0.67-1.72)
Model 2	Reference	1.15 (0.68-1.94)	1.14 (0.72-1.79)
Model 3		1.09 (0.62-1.92)	1.17 (0.69-1.98)
WOMEN (N=3,129)	**BF <28.9%**	**BF ≥28.9–33.3%**	**BF ≥33.3%**
Total mortality events, n=317 (%)	97 (4.65)	102 (6.88)	118 (8.34)
Hazard ratio Model 1	Reference	0.92 (0.61-1.41)	1.06 (0.69-1.62)
Model 2		0.95 (0.62-1.45)	1.11 (0.71-1.75)
Cardiovascular mortality events, n=142 (%)	40 (1.58)	46 (2.87)	56 (4.10)
Hazard ratio Model 1		1.20 (0.65-2.22)	**1.84 (1.02-3.32)**
Model 2	Reference	1.21 (0.64-2.30)	**1.88 (1.00-3.60)**
Model 3		1.39 (0.67-2.90)	**2.20 (1.03-4.67)**

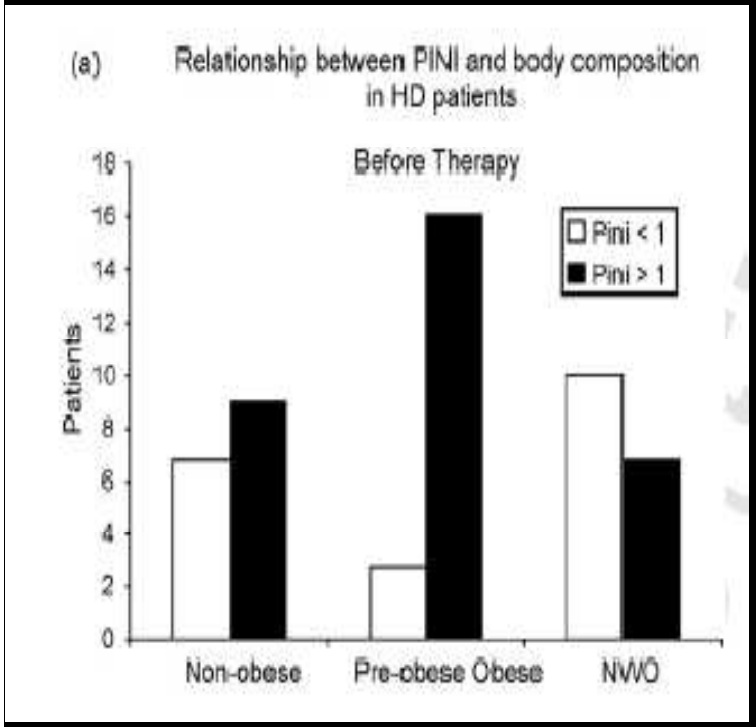
Model 1: Adjusted for age, race and smoking status
Model 2: Adjusted age, race, smoking status and waist circumference
Model 3: Adjusted for age, race, smoking status, waist circumference, dyslipidemia, hypertension, diabetes and CV disease

Conclusions: NWO is associated with a high prevalence of cardiometabolic dysregulation, metabolic syndrome and CV risk factors. In women, NWO is independently linked to increased risk for CV mortality.

European Heart J 2008

Anti-inflammatory effects of combined treatment with acetyl salicylic acid and atorvastatin in haemodialysis patients affected by Normal Weight Obese syndrome

Laura Di Renzo[a,b], Annalisa Noce[c], Sandro De Angelis[d], Natascia Miani[c], Nicola Di Daniele[e], Carmela Tozzo[c], Antonino De Lorenzo[a,b,*]



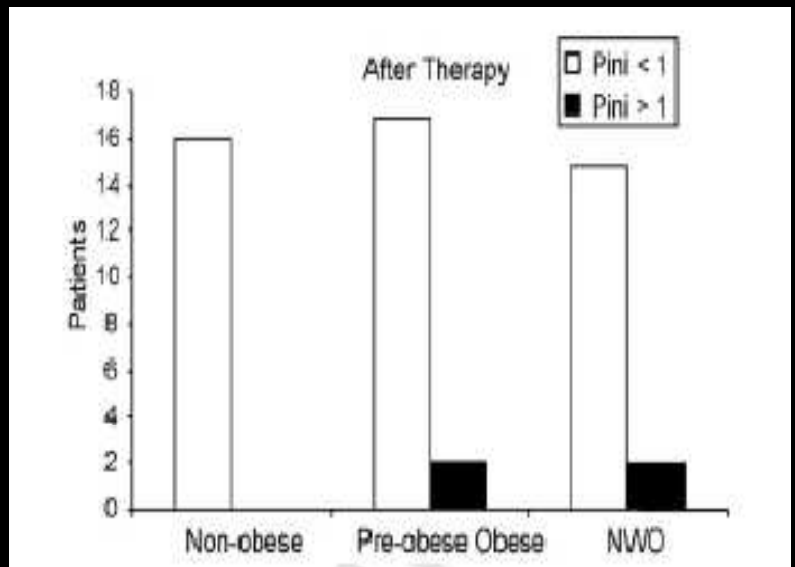


Fig. 1. (A) Relationship between PINI values and body composition parameters in three groups: non-obese (BMI < 25, FM% < 30), pre-obese-obese (BMI > 25, FM% > 30), NWO (BMI < 25, FM% > 30), at baseline time. (B) Relationship between PINI values and body composition parameters in three groups: Non-obese (BMI < 25, FM% < 30), pre-obese-obese (BMI > 25, FM% > 30), NWO (BMI < 25, FM% > 30), after 8 weeks of drugs theraphy with ASA and atorvas-

Le nuove frontiere della nutrizione: i risultati della ricerca

Responsabile Prof. Antonino De Lorenzo

Coordinatore Dott.ssa *Laura Di Renzo*
Università di Roma Tor Vergata

RUOLO DELLA DIETA MEDITERRANEA BIOLOGICA SULLO STATO DI SALUTE

di

Antonino De Lorenzo

Laura Di Renzo

Tabella 6.1 - Indici di qualità nutrizionale (INQ) giornalieri

	Indici di qualità Nutrizionali (INQ)					
	Giorno 1	Giorno 2	Giorno 3	Giorno 4	Giorno 5	Giorno 6
Glucidi	0,96	0,93	1,01	0,93	0,93	0,95
Lipidi	0,97	1,04	0,93	1	1,08	1,04
Protidi	1,3	1,27	1,14	1,33	1,16	1,16

Tabella 7.9 - Valori NAE (escrezione acida globale), PRAL (carico renale giornaliero), CSI (indice di qualità lipidica), TI (indice di trombogenicità), AI (indice di aterogenicità)

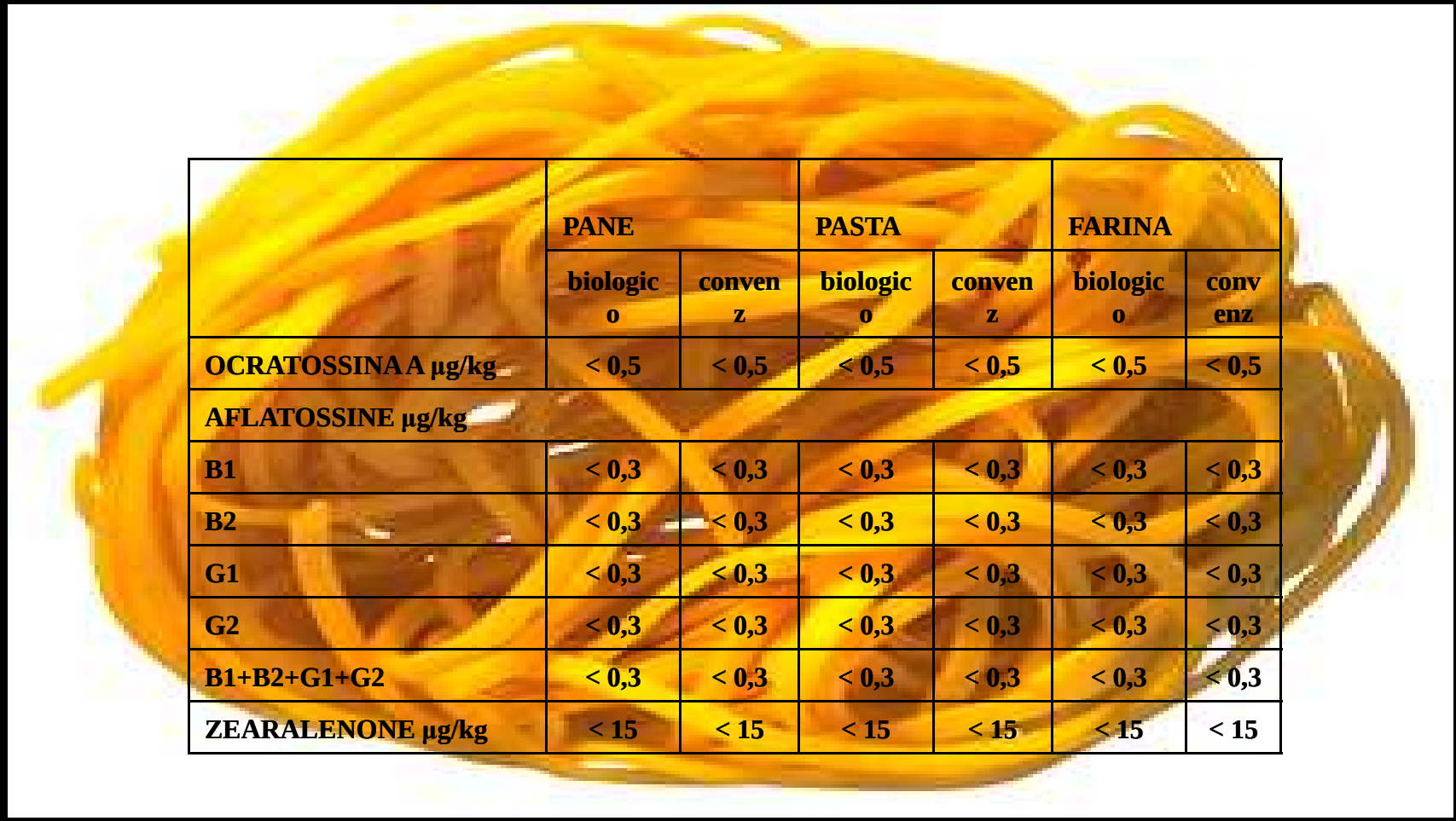
	NAE	PRAL	CSI	TI	AI
Giorno 1	36,21	-9,99	19,95	0,53	0,25
Giorno 2	62,56	16,36	26,62	1,43	0,82
Giorno 3	30,8	-15,4	28,63	0,7	0,32
Giorno 4	31,9	-14,2	17,78	0,61	0,29
Giorno 5	41,08	-5,12	30,1	1,32	0,8
Giorno 6	25,8	-20,4	26,63	0,67	0,3
Giorno 7	39,82	-6,38	21,62	0,65	0,32
Giorno 8	44,38	-1,82	20,17	0,85	0,42

PROGETTO SABIO – LA SOSTENIBILITÀ DELL'AGRICOLTURA BIOLOGICA

Documento di Ricerca SABIO, INEA 2009

	MELE		VERDURA	
	biologico	convenz	biologico	convenz
FITOFARMACI GC-MS (A) mg/Kg				
ACLONIFEN	< 0,01	< 0,01	< 0,01	< 0,01
ACRINATRINA	< 0,01	< 0,01	< 0,01	< 0,01
BOSCALID	< 0,01	**0,044§**	< 0,01	< 0,01
BROMACIL	< 0,01	< 0,01	< 0,01	< 0,01
CLORPIRIFOS-ETILE	**< 0,01**	**0,02§**	**< 0,01**	**0,264§§**
CLORPIRIFOS-METILE	< 0,01	< 0,01	< 0,01	< 0,01
FITOFARMACI GC-MS (B) mg/Kg				
ETOPROFOS	< 0,01	< 0,01	< 0,01	< 0,01
ETOSSAZOLO	< 0,01	< 0,01	< 0,01	< 0,01
ATRIDIAZOLO	< 0,01	< 0,01	< 0,01	< 0,01
FAMOFOS (FAMFUR)	< 0,01	< 0,01	< 0,01	< 0,01
FAMOXADONE	< 0,01	< 0,01	< 0,01	< 0,01
FENAMIFOS	< 0,01	< 0,01	< 0,01	< 0,01
FITOFARMACI GC-MS (C) mg/Kg				
PICOXISTROBIN	< 0,01	< 0,01	< 0,01	< 0,01
PIPERONIL BUTOSSIDO	< 0,01	< 0,01	< 0,01	< 0,01
PIRAZOFOS	< 0,01	< 0,01	< 0,01	< 0,01
PIRIDABEN	< 0,01	< 0,01	< 0,01	< 0,01
PIRIDAFENTION	< 0,01	< 0,01	< 0,01	< 0,01

Livello di micotossine nei cereali (pane, pasta e farina) biologici e convenzionali misurato tramite metodica HPLC.

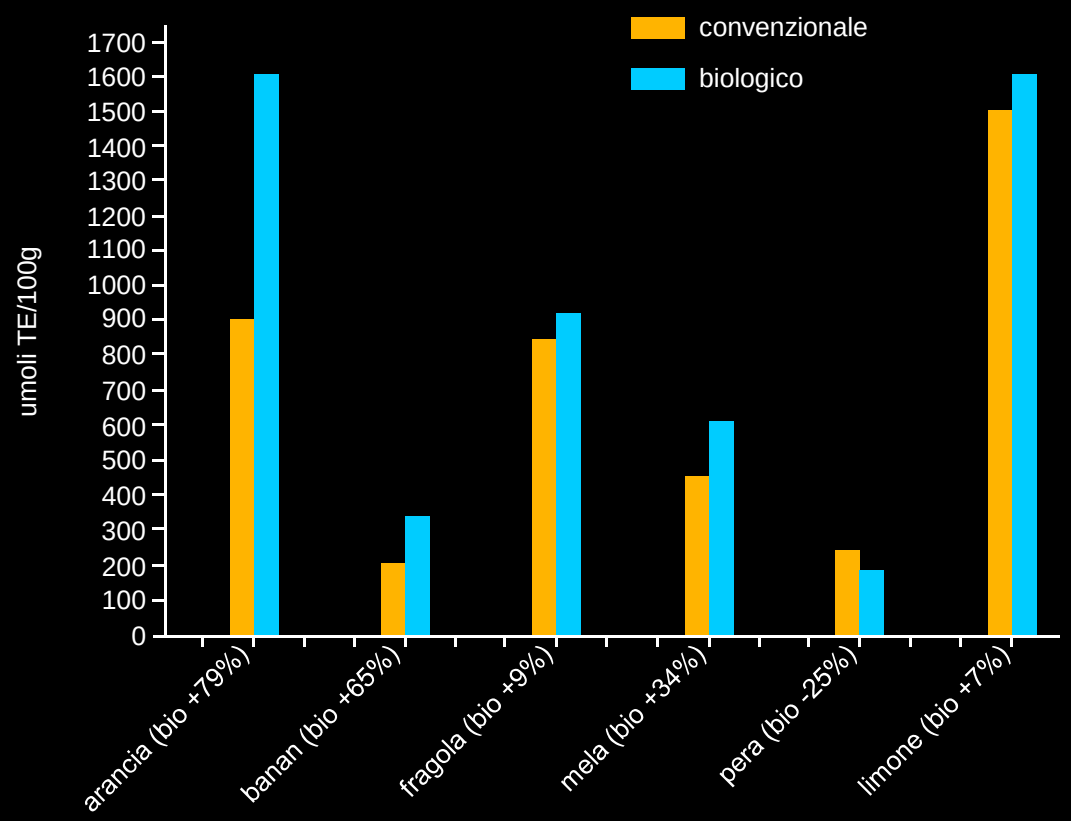


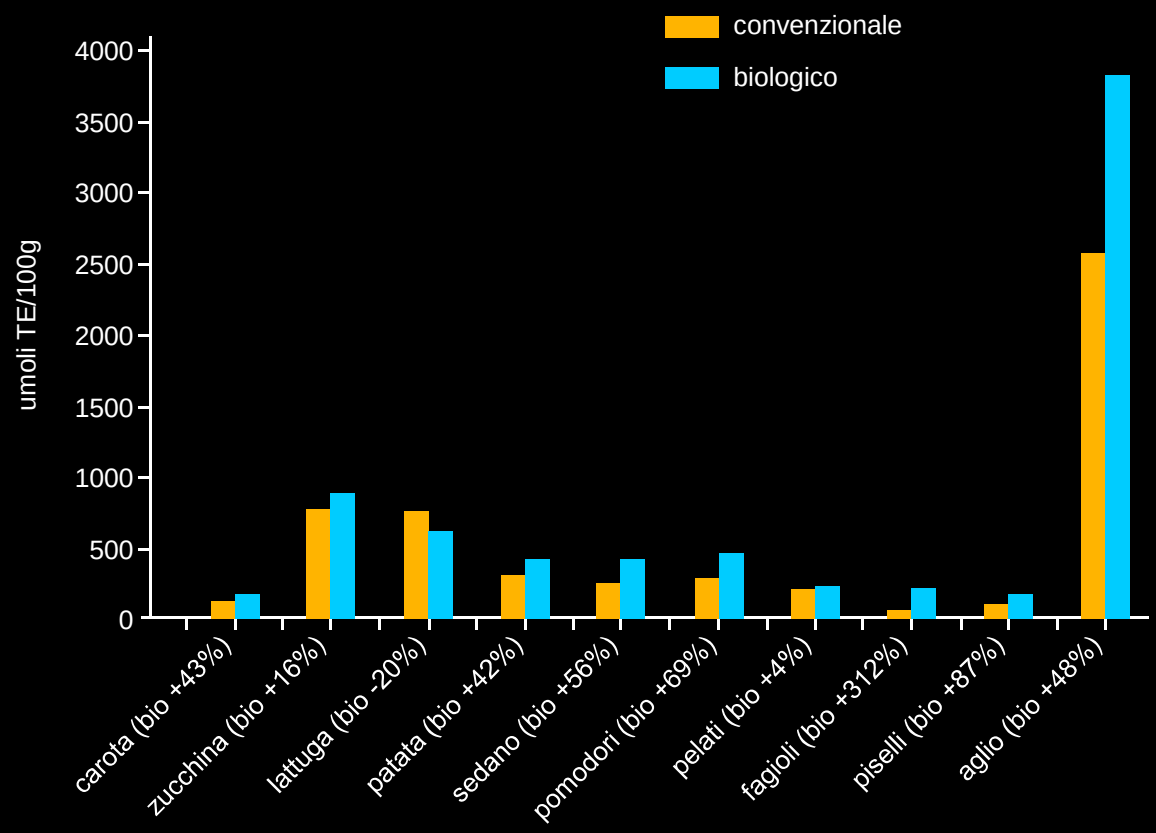
	PANE		PASTA		FARINA	
	biologico	convenz	biologico	convenz	biologico	convenz
OCRATOSSINA A µg/kg	< 0,5	< 0,5	< 0,5	< 0,5	< 0,5	< 0,5
AFLATOSSINE µg/kg						
B1	< 0,3	< 0,3	< 0,3	< 0,3	< 0,3	< 0,3
B2	< 0,3	< 0,3	< 0,3	< 0,3	< 0,3	< 0,3
G1	< 0,3	< 0,3	< 0,3	< 0,3	< 0,3	< 0,3
G2	< 0,3	< 0,3	< 0,3	< 0,3	< 0,3	< 0,3
B1+B2+G1+G2	< 0,3	< 0,3	< 0,3	< 0,3	< 0,3	< 0,3
ZEARALENONE µg/kg	< 15	< 15	< 15	< 15	< 15	< 15

< equivale ad inferiore al LOQ (limite di quantificazione/determinazione)

Livello di micotossine in frutta (mele), verdura (bieta) e legumi (fagiolini) biologici e convenzionali misurato tramite metodica HPLC.

	LEGUMI		MELE		VERDURA	
	biologico	convenz	biologico	convenz	biologico	convenz
OCRATOSSINA A µg/kg	< 0,5	< 0,5	\	\	\	\
AFLATOSSINE µg/kg						
B1	< 0,3	< 0,3	\	\	\	\
B2	< 0,3	< 0,3	\	\	\	\
G1	< 0,3	< 0,3	\	\	\	\
G2	< 0,3	< 0,3	\	\	\	\
B1+B2+G1+G2	< 0,3	< 0,3	\	\	\	\
ZEARALENONE µg/kg	< 15	< 15	\	\	\	\
ALTERNARIA TOXINS µg/kg						
TENUAZONIC ACID (TEA)	\	\	<10	<10	<10	<10
ALTENUENE (ALT)	\	\	<10	<10	<10	<10
TENTOXIN (TEN)	\	\	<10	<10	<10	<10
ALTERNARIOL (AOH)	\	\	<10	<10	<10	<10
ALTERNARIOL MONOMETHYLETHER(AME)	\	\	<10	<10	<10	<10


convenzionale
biologico
umoli TE/100g
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
arancia (bio +79%)
banan (bio +65%)
fragola (bio +9%)
mela (bio +34%)
pera (bio -25%)
limone (bio +7%)


convenzionale
biologico
umoli TE/100g
4000
3500
3000
2500
2000
1500
1000
500
0
carota (bio +43%)
zucchina (bio +16%)
lattuga (bio -20%)
patata (bio +42%)
sedano (bio +56%)
pomodori (bio +69%)
pelati (bio +4%)
fagioli (bio +312%)
piselli (bio +87%)
aglio (bio +48%)

European Review for Medical and Pharmacological Sciences 2007; 11: 185-192

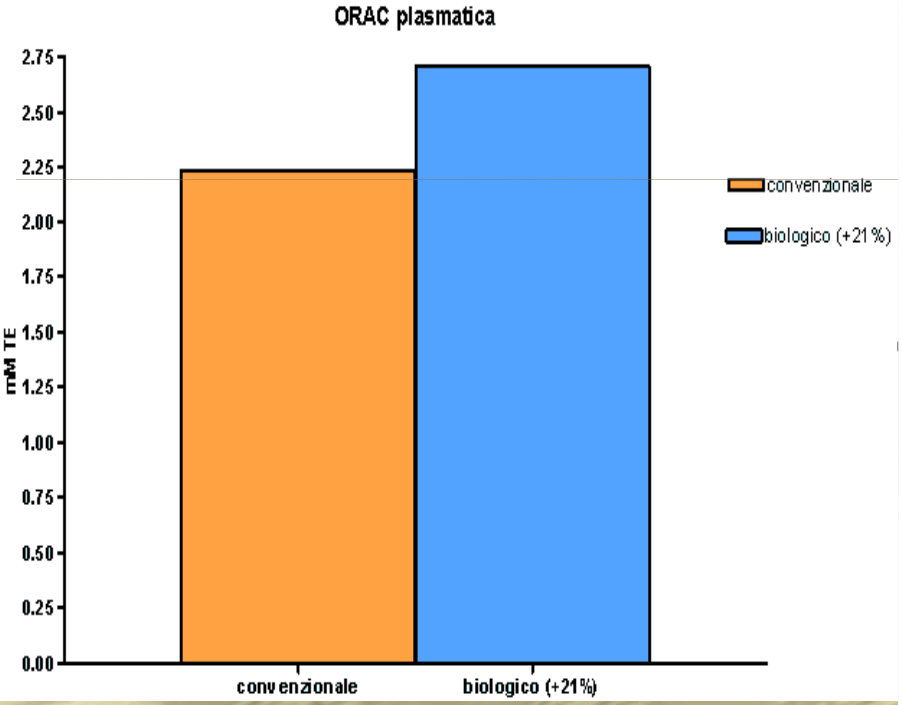
Is antioxidant plasma status in humans a consequence of the antioxidant food content influence?

L. DI RENZO[1,2], D. DI PIERRO[3], M. BIGIONI[1], V. SODI[1], F. GALVANO[4], R. CIANCI[1,5], L. LA FAUCI[4], A. DE LORENZO[1]

[1]Department of Neuroscience, Division of Human Nutrition, University of Tor Vergata, Rome (Italy)
[2]I.N.Di.M., National Istitute for Mediterranean Diet and Nutrigenomic, Reggio Calabria (Italy)

Table I. Antioxidant capacity in conventional and organic produts.

	Conventional		Organic		
	Median	Range	Median	Range	_%
Garlic	2572,5	70	3816,5	52	48**
Orange	900	50	1606	56	79**
Banana	205,9	16	339	38,6	65**
Carrot	116,4	27,2	166,8	58,4	43**
Beans	50,4	21,2	207,6	31,2	312**
Strawberry	846,7	37,2	921,2	41,6	9**
Lettuce	756,3	99,8	608,5	80,8	-20**
Limon	1505	54	1603	48	7**
Apple	454	81,9	610,5	47	34**
Potato	298,8	4,4	423,6	50,8	42**
Tomato Souce	205,2	19,8	213,8	58,8	4
Pear	246,4	132,2	185,3	58,4	-25**
Peas	88,2	41,8	164,8	65	87**
Tomato	280,8	72,6	475,2	98,4	69**
Celery	265,7	119,8	414,9	40,4	56**
Wine	3132	280,2	4725	164	51**
Courgettes	774	148,8	894	60,6	15**
Milk	195,8	78,4	216,6	38,6	11*





7.1 Variabili antropometriche, densitometriche ed analisi biochimico-cliniche

I parametri antropometrici e le variabili impedenziometriche misurati al tempo T1 e T3 nei soggetti sani e nei pazienti affetti da insufficienza renale cronica (IRC) sono riassunti rispettivamente nelle tabelle 7.1 e 7.2.

Tabella 7.1 - Variabili antropometriche e densitometriche al tempo T1 e T3 in soggetti sani

	T1		T3		
	Media	SD	Media	SD	P*
BMI	31,69	± 6,62	31,83	± 7,01	NS
Weight (kg)	90,66	± 17,50	91,05	± 18,72	NS
Fat (%)	35,5	± 2,33	25,07	± 2,47	0,001
Fat (kg)	27,42	± 3,79	21,31	± 3,91	0,001
Lean (%)	64,5	± 2,33	74,93	± 2,47	0,001
Lean (kg)	55,27	± 2,41	63,69	± 2,09	0,004

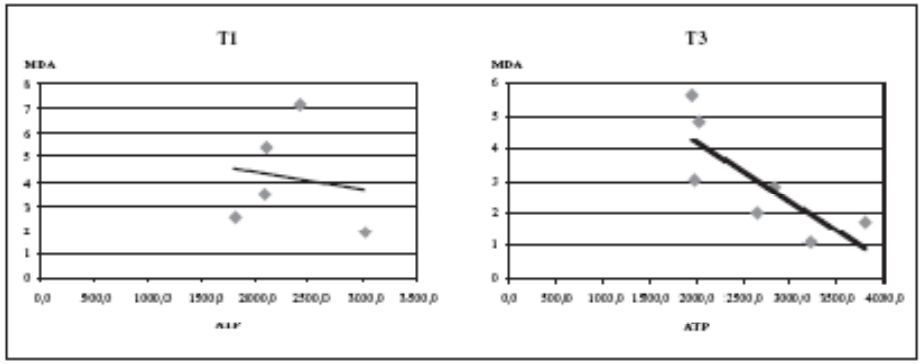
* *P<0.05 Test Non Parametrico di Wilcoxon*
* *P≤0.05 è stato considerato statisticamente significativo*

Tabella 7.2 - Variabili antropometriche e densitometriche al tempo T1 e T3 in pazienti affetti da IRC

	T1		T3		
	Media	SD	Media	SD	P*
Weight (kg)	85,17	± 13,97	79,52	± 10,41	0,0365
BMI	26,95	± 3,30	25,36	± 2,50	0,0059
Fat (%)	26,06	± 5,79	19,91	± 1,99	0,0007
Fat (kg)	23,36	± 8,88	16,18	± 3,34	0,0054
Fat trunk(%)	37,86	± 3,57	34,38	± 4,53	0,0033
Lean (%)	73,9	± 5,83	80,08	± 1,99	0,001

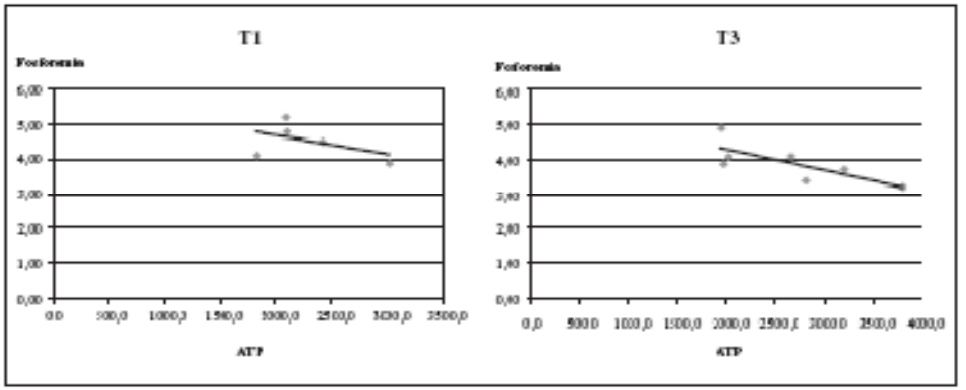
* *P<0.05 Test Non Parametrico di Wilcoxon*
* *P≤0.05 è stato considerato statisticamente significativo*

Figura 7.1 - Analisi di regressione lineare tra livelli di ATP e MDA



La diminuzione della fosforemia ematica (12%), di grande rilevanza in pazienti uremici, può essere in parte da collegare all'aumentata fosforilazione dell'AMP e ADP a beneficio di una più alta concentrazione di ATP come risulta evidente dopo i 15 gg di alimentazione biologica.

Figura 7.2 - Analisi di regressione lineare tra livelli di ATP e fosforemia



Il miglioramento della Carica Energetica Potenziale dopo l'alimentazione biologica è ovviamente da imputare all'aumento della concentrazione di ATP a spese di una diminuzione del fosforo ematico.

Infatti gli eritrociti, come anche altri tipi di cellule, mostrano differenti meccanismi di difesa contro il danno indotto dai radicali liberi; fra questi si conoscono difese di tipo enzimatico, che richiedono energia sotto forma di ATP

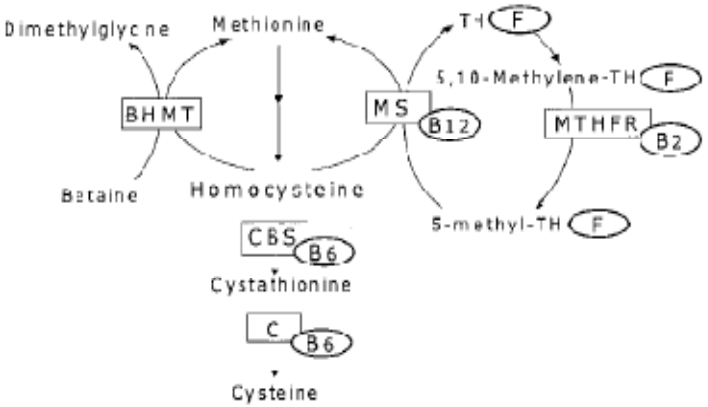


FIG 1. Simplified intracellular homocysteine metabolism. BHMT, betaine-homocysteine methyltransferase; C, γ-cystathionase; MS, methionine synthase; TH, tetrahydro; F, folate; B2, vitamin B_2; B6, vitamin B_6; B12, vitamin B_{12}.

OMOCISTEINA: UN INDICATORE DELLO STATO DI SALUTE?

BIA's Values at T0 and at T1

	T0		T1			
	Median	Range	Median	Range	% difference	Spearman's Correlation
Fat (%)	29,1	18,7	23,4	23,2		0,983*
Fat (Kg)	24,3	33,1	19,9	36,9		0,983*
Lean (%)	70,9	18,7	76,6	23,2		0,983*
Lean (Kg)	59,4	20,9	65,1	22,3		0,996*
TBW (%)	51,9	13,7	56,1	17		1*
ECW (%)	41,5	14,2	44,9	12,2		0,867*
ICW (%)	58,5	14,2	44,9	12,2		0,867*
Res (Ohm)	464	204	412	200	-11,2%**	
Rea (Ohm)	56	27	48	27	-14,3%**	
Na/K	0,9	0,4	1,05	0,3	+16,6%**	

* P<0.01

** P<0.05 Wilcoxon's Non Parametric Test

– Ematic's values at T0 and at T1

	T0		T1		
	Median	Range	Median	Range	Difference
Homocysteine (uM/L)	17,3	29,9	12,15	19,7	-5,15*
Phosphorus (mg/dl)	4,7	0,4	3	5,02	-1,7*
Sodium (mEq/L)	141,00	3,00	140,00	4,00	-1 NS
Potassium (mEq/L)	4,3	0,4	4,3	1,3	0 NS
Calcium (mg/dl)	9,7	0,5	9,5	1,3	-0,2 NS
Glucose (mg/dl)	88	79	86	72	-2 NS
Triglycerides (mg/dl)	83	126	113	92	30 NS
Total cholesterol (mg/dl)	155	110	178	115	23 NS
HDL cholesterol (mg/dl)	41	18	38	22	-3 NS

P<0.05 Wilcoxon Signed Ranks Test

EFFETTI DELLA DIETA MEDITERRANEA ITALIANA DI RIFERIMENTO BIOLOGICA SULLO STATO DI SALUTE DI DONNE AFFETTE DALLA SINDROME "NORMAL WEIGHT OBESE" ED INSUFFICIENZA RENALE CRONICA

Di Renzo L.[1,2], Rizzo M.[1], Noce A.[3], De Lorenzo A.[1,2]

[1] *Dipartimento di Neuroscienze, Cattedra di Alimentazione e Nutrizione Umana, Università di Tor Vergata, Roma*
[2] *I.N.Di.M., Istituto Nazionale per la Dieta Mediterranea e la Nutrigenomica, Reggio Calabria*
[3] *Servizio di Nefrologia e Dialisi, Policlinico "Tor Vergata" Roma*

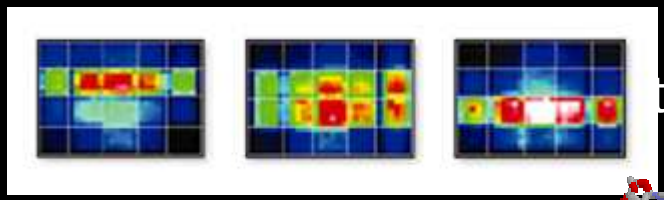
Tab. 1 - **Variabili biochimico-cliniche nelle donne obese sane e nelle donne NWO con IRC ai tempi T0 e T1.**

	Sani					NWO con IRC				
	T0		T1			T0		T1		
	media	DS	media	DS	*P**	media	DS	media	DS	*P**
Omocisteina(M/L)	23.06	± 5.17	12.71	± 6.15	0.0106	22.12	± 5.17	17.81	± 5.29	0.0026
Azotemia (mg/dl)	33.20	± 11.33	30.66	± 8.51	NS	83.21	± 47.49	80.76	± 50.92	NS•
Creatinina (mg/dl)	0.88	± 0.29	0.95	± 0.18	NS	1.75	± 0.61	1.67	± 0.27	NS
Colesterolo Totale (mg/dl)	167.02	± 60.55	189.66	± 36.21	NS	181.57	± 14.84	165.57	± 27.71	0.0369
Colesterolo HDL(mg/dl)	33.04	± 12.30	39	± 6.86	NS	30.92	± 7.41	32.07	± 6.76	NS
Trigliceridi (mg/dl)	98.44	± 47.56	113.44	± 26.70	NS	168.71	± 54.53	156.85	± 37.88	NS
Calcio (mg/dl)	9.64	± 0.16	9.43	± 0.37	NS	9.93	± 0.57	9.33	0.44	<0.0001
Fosforo (mg/dl)	4.64	± 0.15	3.01	± 0.13	<0,0001	4.10	± 0.88	3.54	± 0.26	0.0382
Sodio (mEq/L)	140.97	± 0.86	139.51	± 1.11	0,0141	140.85	± 1.09	140.57	± 0.85	NS
Potassio (mEq/L)	4.34	± 0.15	4.31	± 0.39	NS	4.90	± 0.34	4.67	±0.65	NS
Glucosio (mg/dl)	98.91	± 24.28	92.66	± 22.02	NS	86.78	± 6.71	90.23	±8.55	NS
Vitamina B_{12} (pg/ml)	217.33	± 20.10	259.11	± 22.65	0.0019	574.92	± 247.49	516.42	±195.42	NS
Microalbuminuria (mg/L)						93.55	± 121.9	71.7	±100.48	0.00286

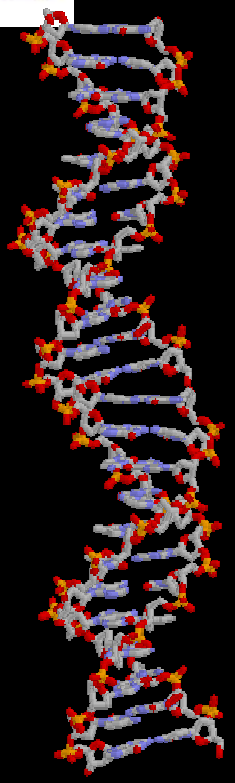
•) Test di Mann-Whitney
*) $P \leq 0,05$ è considerato statisticamente significativo.



trition



AA AB BB



“Mangia secondo il tuo genotipo”



Muller M et al. Nature Rev Genetics 2003;4:315-322

Reg. CE 1924/2006
1 gennaio 2009



Property of Eriks...se.com

Istituto Nazionale per la Dieta Mediterranea e la Nutrigenomica
I.N.Di.M.

AGRICOLTURA BIOLOGICA

UNIVERSITA' DEGLI STUDI DI ROMA
TorVergata
Università

Data:
domenica 07.06.2009

LA STAMPA

Estratto da Pagina:
28

LA COLDIRETTI: PER IL VERTICE DELL'AQUILA PRONTO UN MENU TRICOLORE

Ai Grandi solo dieta mediterranea candidata a Patrimonio dell'umanità

GIANNI STORNELLO

Agli ospiti del prossimo G8, all'Aquila, verranno offerti i migliori piatti della dieta mediterranea, frutto dell'agricoltura italiana. Un annuncio, questo del presidente del Consiglio Silvio Berlusconi, che rallegra Coldiretti. «Siamo pronti a presentare, come ha detto il premier, un "menu tricolore": il rosso pomodoro, il verde basilico, il bianco delle mozzarelle, oltre all'ottima carne della razza chianina», dice il presidente della Confederazione, Sergio Marini.

«La scelta di una "carta" simile per gli otto Grandi ha un valore straordinario per l'Italia, che è il Paese simbolo di questo tipo di cucina e dove più radicata è la cultura alimentare, fondata sui principi della dieta mediterranea, con primati raggiunti nelle principali produzioni base, come la frutta, la verdura, l'olio d'oliva, il vino e la pasta» aggiunge ancora Marini. «Tra l'altro, le statistiche confermano che a mantenere vivo il ricordo dell'Italia per uno straniero su due (45%) che visita il nostro Paese sono il cibo e il vino. Ecco quindi la valenza dell'occasione del vertice per far conoscere, tramite le mense del G8, le autentiche produzioni italiane».



Il 45% degli stranieri che visitano l'Italia serba il ricordo di cibo e vino

Coldiretti sottolinea il termine «autentiche», perché due piatti della cucina italiana su tre non utilizzano prodotti della nostra agricoltura, ma cibi fatti passare per italiani e invece ottenuti con materie prime scadenti.

Questa grande occasione di vetrina internazionale, secondo Marini, rafforzerà inoltre anche la candidatura della «dieta mediterranea» a Patrimonio dell'umanità, tutelato dall'Unesco, che dovrebbe esprimersi a settembre, dopo il sostegno del Parlamento e della Commissione europei.

La dieta mediterranea - fanno osservare alla Coldiretti - «dà al nostro Paese un vantaggio non indifferente dal punto di vista gastronomico e salutare». Oltre a mangiar bene, a guadagnarci è anche il corpo. «Questo tipo di dieta ha consentito ai nostri connazionali di conquistare il record della longevità, con una vita media di 78,6 anni per gli uomini e di 84,1 per le donne, nettamente superiore alla media europea».

Secondo recenti studi pubblicati sul «British Medical Journal», analizzati dal team di Francesco Sofi, nutrizionista dell' Università di Firenze, la dieta mediterranea riduce del 13 per cento l'incidenza del Parkinson e dell'Alzheimer, del 9 per cento quella dei problemi cardiovascolari così come quella del cancro. Un risultato confermato da numerosi studi scientifici - precisa la Coldiretti - che ha contribuito al suo successo anche all' estero, dove pasta, vino, olio d'oliva e pomodori sono i prodotti alimentari più esportati e svolgono una funzione di traino per il made in Italy.

FINE

Grazie per non
esservi addormentati



.... o per averlo fatto in silenzio !