



UNIVERSITÀ
DEGLI STUDI
DI MILANO

«Human Security» e diritti d'accesso ai servizi in declinazione urbana: educazione, sanità, ambiente

EDUCAZIONE ALIMENTARE E STILI DI VITA PER UNA CITTADINANZA CONSAPEVOLE

INTERDISCIPLINARY RESEARCH CENTRE



Cooperation & Governance agendas



UNIVERSITÀ
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LA STATALE

I Seminari di SHuS

venerdì mattina 9:15-13:00

via Festa del Perdono, 7 - Milano

28 Aprile-26 Maggio 2017

CITTÀ

SOSTENIBILI

COMUNITÀ SCIENTIFICA E

CITTADINANZA ATTIVA:

IDEE, PROPOSTE, AZIONI

12.05.2017

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Sezione Medicina dell'Esercizio e Patologie Funzionali.
Humanitas Clinical and Research Center*

**non capisco perchè ingrasso.....
mangio solo pane per celiaci
e prodotti a Km zero...**



**ho fatto ½ ora di cyclette.....
devo reintegrare
i sali minerali che ho perso....**



**Sono diventato
vegetariano
perchè la carne
fa venire il cancro!**





**...ma Dottore... non
posso fare
nulla...anche i miei
genitori sono
obesi!...**



**non sono io che
mangio....è lo stress che
mi fa ingrassare!**



**Mio fratello ha fatto un infarto.
Vorrei fare qualche esame...come
si dice: «*prevenire è meglio che
curare!*»**



Quante caloria ha un panino cotto e formaggio (pane 80 gr, prosciutto cotto 60 gr e mozzarella 40 gr)?

☐ **230 Kcal**

☐ **310 Kcal**

☒ **470 Kcal**

-PANE 80 gr	240 Kcal
-PROSCIUTTO COTTO 60gr	130 Kcal
-MOZZARELLA 40 gr	100 Kcal
TOTALE	470 Kcal



Quale olio contiene meno colesterolo?

☐

Olio di soia

☐

Olio di semi

☐

Olio extravergine di oliva

☐

Tutti in egual misura

☒

**Nessun olio contiene
colesterolo**



I Legumi contengono soprattutto:



Proteine



Grassi



Carboidrati



fibre



vitamine

ALIMENTO Dati per 100 gr	Grammi di carboidrati	Grammi di proteine	Grammi di grassi	Grammi di acqua	Kcal	Ripartizione % dell'energia
FAGIOLI	47.5	23.6	2	10.5	291	carboidrati: 63% proteine: 31% grassi: 6%
MANZO	0	21.4	3.7	73.8	119	carboidrati: 0% proteine: 72% grassi: 28%
VITELLO	0	20.7	2.7	76.9	107	carboidrati: 0% proteine: 77% grassi: 23%
BRESAOLA	0	32	2.6	60	151	carboidrati: 0% proteine: 85% grassi: 15%
PROSCIUTTO CRUDO	0	25.5	18.4	50.6	268	carboidrati: 0% proteine: 38% grassi: 62%
POLLO CON PELLE	0	19	10.6	69.5	171	carboidrati: 0% proteine: 44% grassi: 56%
POLLO SENZA PELLE	0	19.4	3.6	76.1	110	carboidrati: 0% proteine: 71% grassi: 29%
BRANZINO	0.6	16.5	1.5	79	82	carboidrati: 2% proteine: 81% grassi: 17%
RICOTTA	3.5	8.8	10.9	75.7	146	carboidrati: 9% proteine: 24% grassi: 67%
GRANA	0	33	28	32	392	carboidrati: 0% proteine: 34% grassi: 66%
UOVO INTERO	0	12.4	8.7	77.1	128	carboidrati: 0% proteine: 39% grassi: 61%
UOVO (SOLO ALBUME)	0	10.7	0	87.7	43	carboidrati: 0% proteine: 100% grassi: 0%

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http://www.inran.it/646/tabelle_di_composizione_degli_alimenti.html

Quanto bisogna camminare per smaltire una lattina di aranciata?

- ☐ 60 min
- ☒ 45 min
- ☐ 30 min
- ☐ 20 min

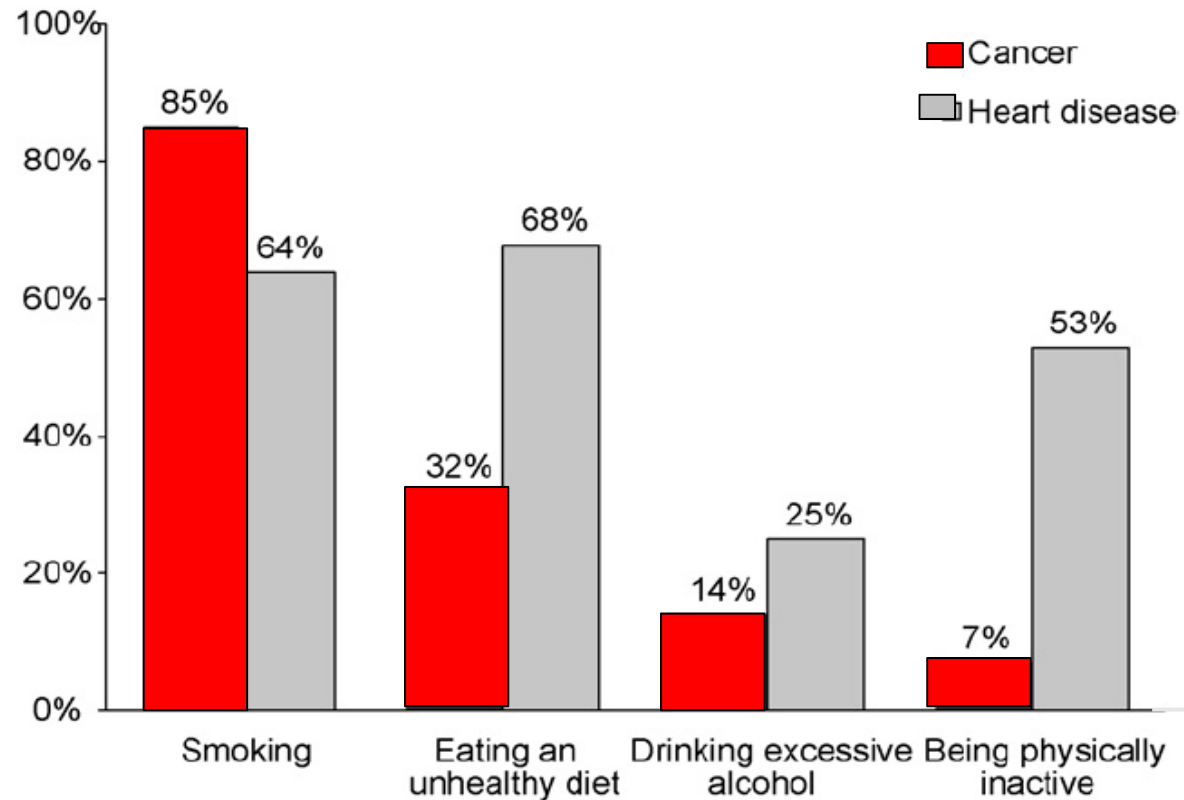


Fig. 1. Proportions of individuals who identified each of four lifestyle risk factors as heart disease or cancer risk factors.

STILE DI VITA

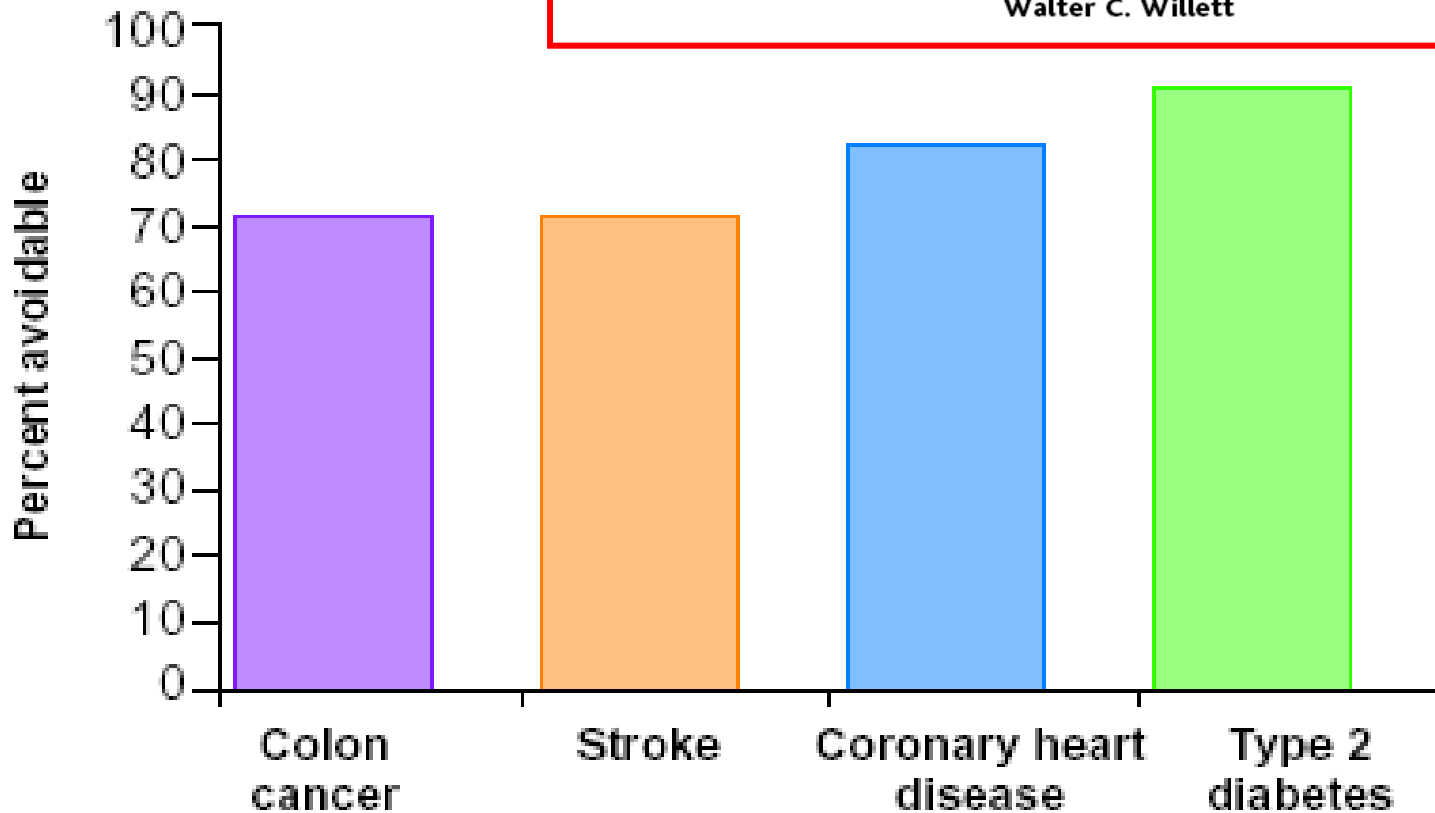


Science **296**, 695 (2002);

VIEWPOINT

Balancing Life-Style and Genomics Research for Disease Prevention

Walter C. Willett





Italy

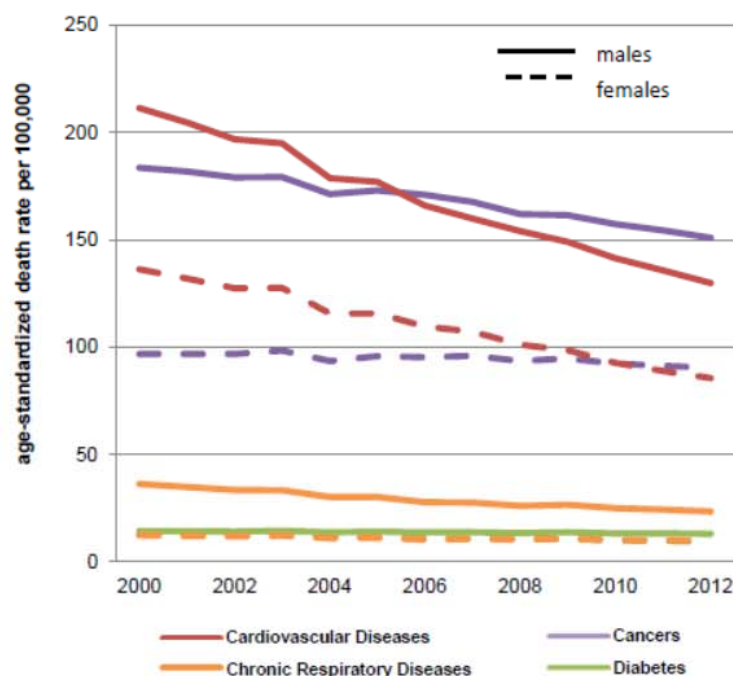
Total population: 60 885 000

Income Group: High

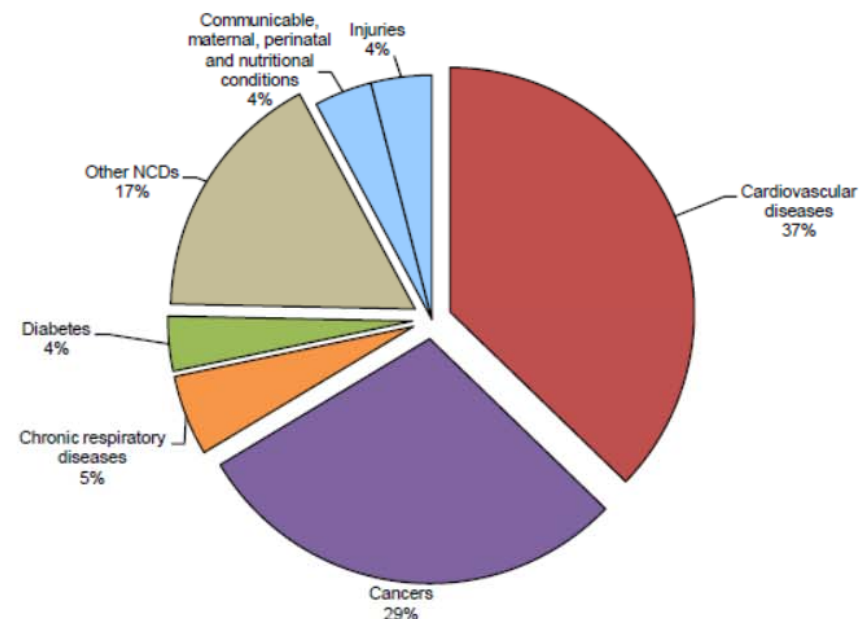
Percentage of population living in urban areas: 68.4%

Population proportion between ages 30 and 70 years: 55.0%

Age-standardized death rates



Proportional mortality (% of total deaths, all ages, both sexes)

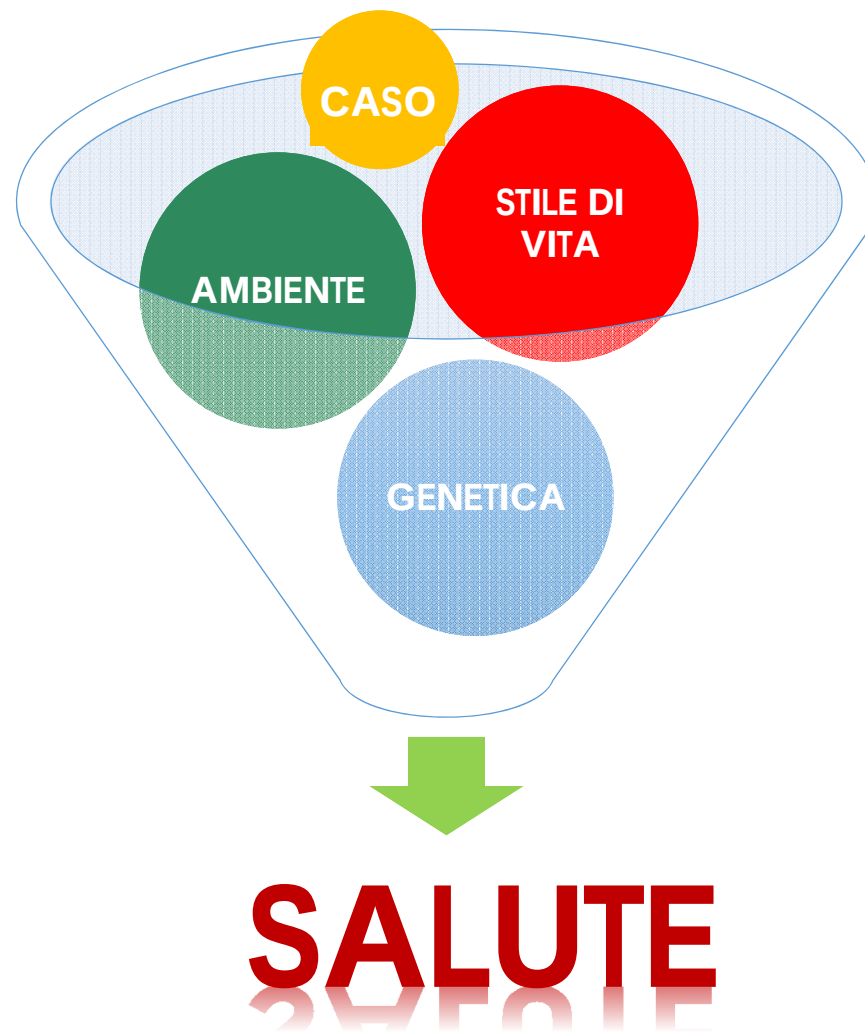


Total deaths: 573,000
NCDs are estimated to account for 92% of total deaths.

Premature mortality due to NCDs

The probability of dying between ages 30 and 70 years from the 4 main NCDs is 10%.





Genetic Risk, Adherence to a Healthy Lifestyle, and Coronary Disease

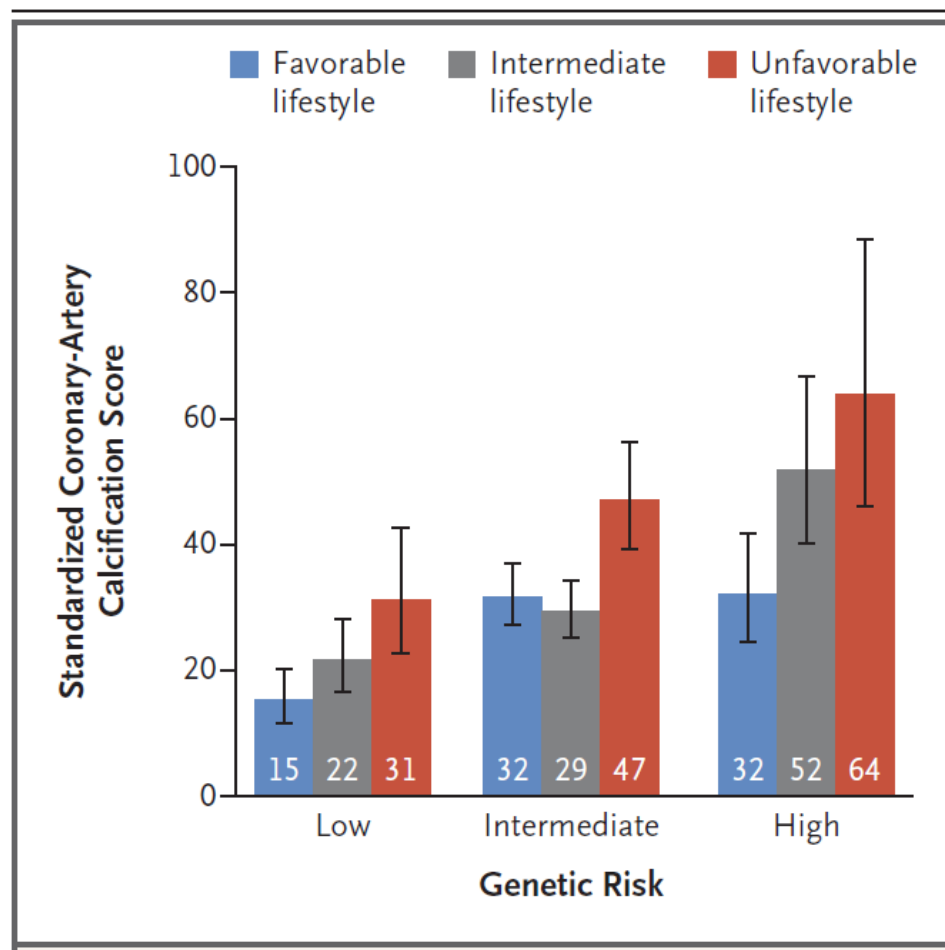
N Engl J Med 2016;375:2349-58.
DOI: 10.1056/NEJMoa1605086

CONCLUSIONS

Across four studies involving 55,685 participants, genetic and lifestyle factors were independently associated with susceptibility to coronary artery disease. Among participants at high genetic risk, a favorable lifestyle was associated with a nearly 50% lower relative risk of coronary artery disease than was an unfavorable lifestyle. (Funded by the National Institutes of Health and others.)

Figure 4. Coronary-Artery Calcification Score in the BioImage Study, According to Lifestyle and Genetic Risk.

Among the participants in the BioImage Study, a standardized score for coronary-artery calcification was determined by means of linear regression after adjustment for age, sex, education level, and principal components of ancestry. Standardization was performed on the basis of study averages for each covariate. Average standardized coronary-artery calcification scores are expressed in Agatston units, with higher scores indicating an increased burden of coronary atherosclerosis. The I bars represent 95% confidence intervals.



Poligenic risk score was derived from an analysis of up to 50 single-nucleotide polymorphisms that had achieved genomewide significance for association with coronary artery disease in previous study

Epigenetic regulation of gene expression: how the genome integrates intrinsic and environmental signals

Rudolf Jaenisch¹ & Adrian Bird²

doi:10.1038/ng1089



**IO, COSA
POSSO
FARE ?**

EDITORIAL COMMENT

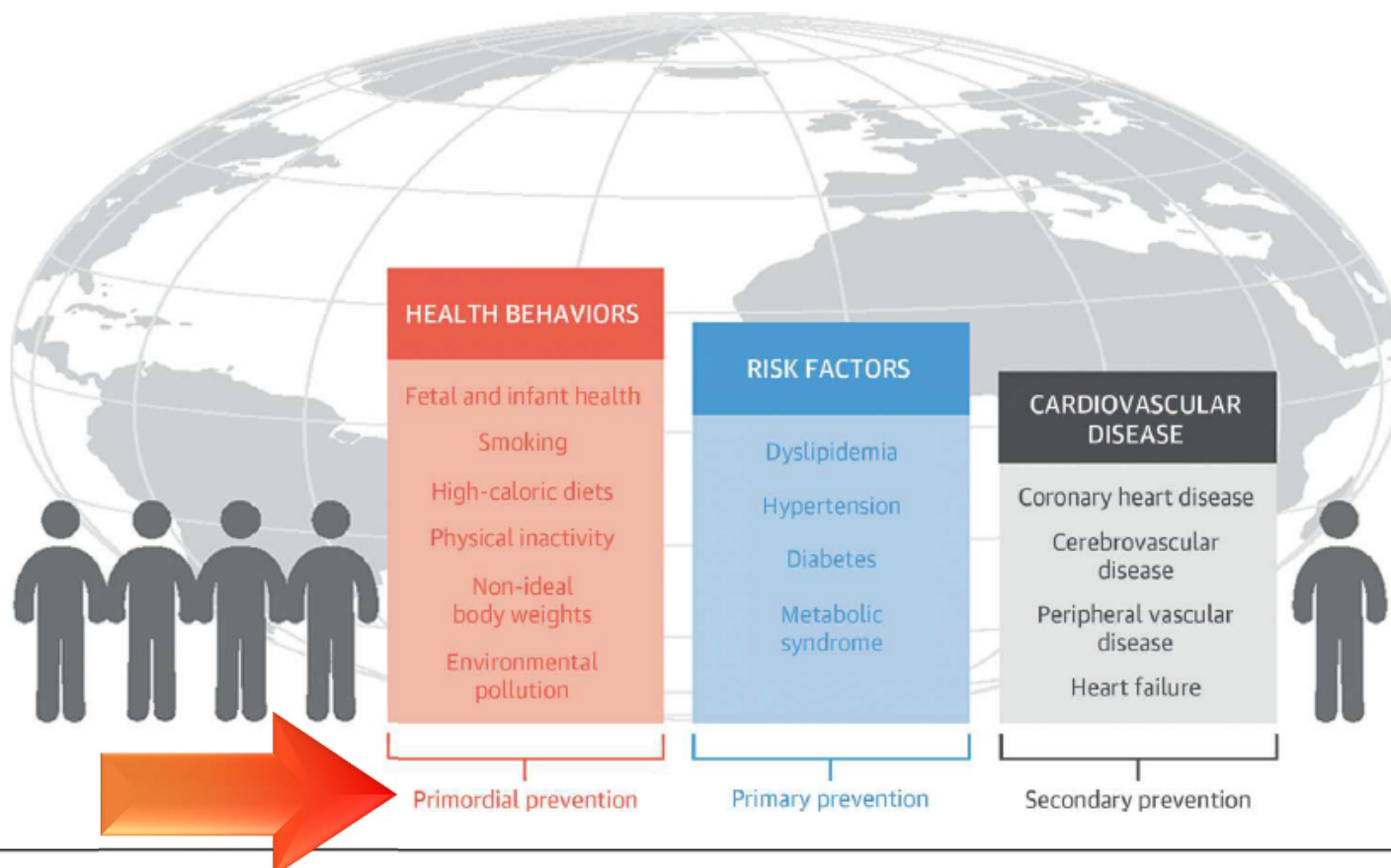
Moving Toward Global Primordial
Prevention in Cardiovascular Disease

The Heart of the Matter*



PREVENZIONE

FIGURE 1 Building Blocks of Global Cardiovascular Disease Prevention and Health Promotion



The health behaviors and cardiovascular risk factors outlined in this figure are based on American Heart Association-defined metrics encompassing ideal cardiovascular health (3).



HEALTH MANAGEMENT

LIFE STYLE CHANGES

DRUGS
VACCINATION
BETTER ENVIRONMENT



EARLY DIAGNOSIS



Stile di vita

PREVENZIONE

diagnostica



ALIMENTAZIONE E SALUTE

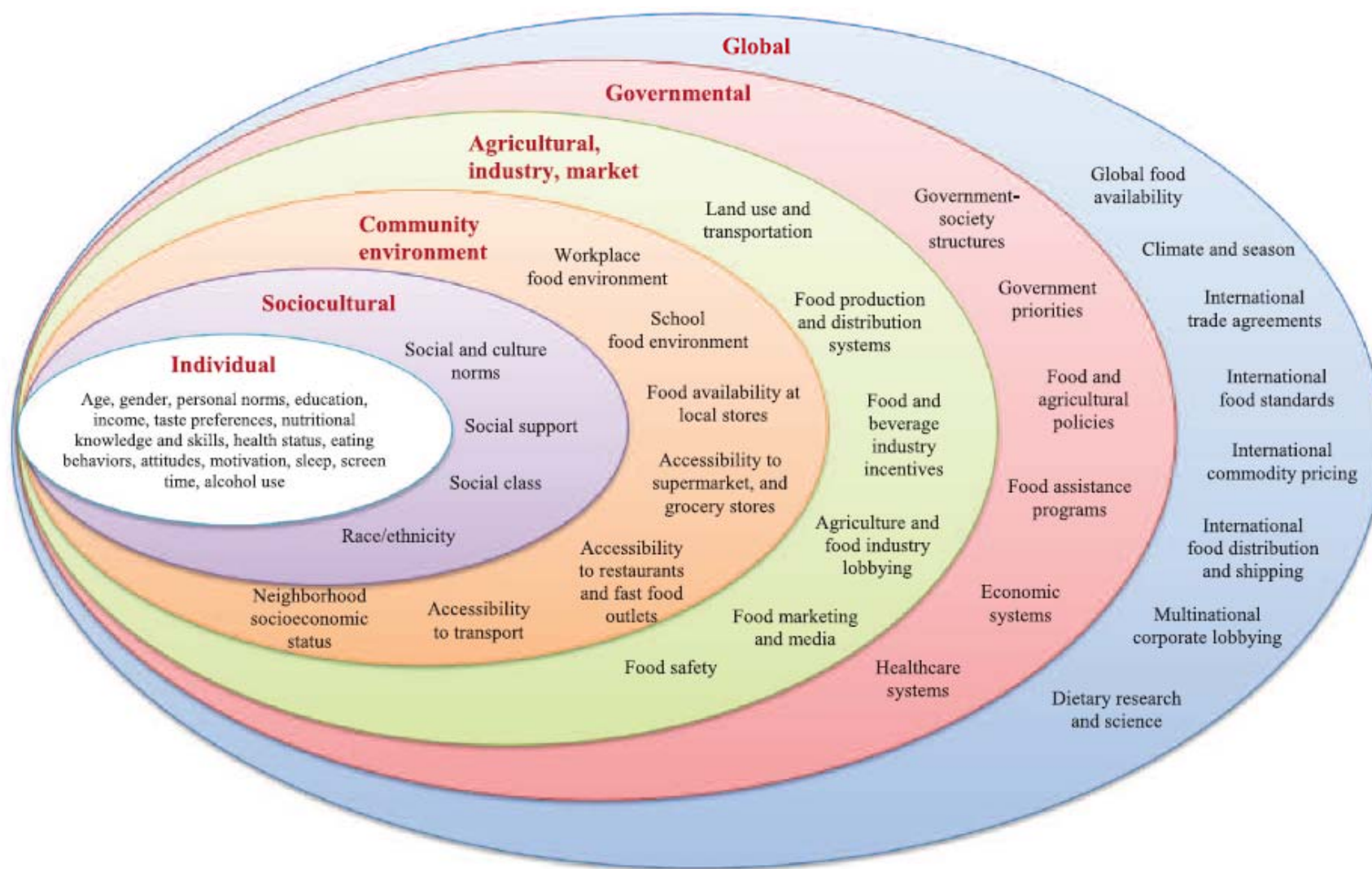


Figure 9. Barriers and opportunities for healthy eating. Reproduced from Afshin et al¹⁰ with permission of (Circulation. 2016;133:187-225. John Wiley & Sons, Ltd.



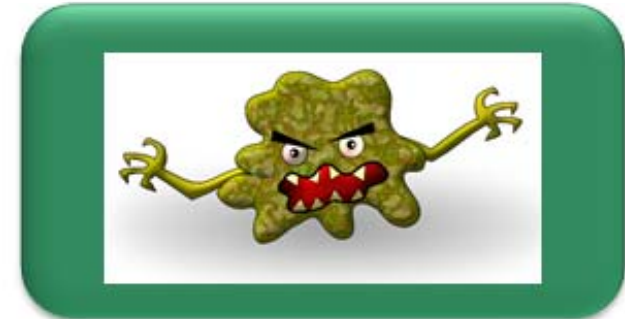
IO cosa posso fare?.....



SFIDE:

- Non sempre vi è il **BISOGNO** di essere educati
- Educazione «fai da te», ruolo dei Media, Peers, ecc

ALIMENTAZIONE E SALUTE



Origine SPAGNA, Categoria I, Calibro 3-4
Tr.E901,E904,E914,Imazalil,Tiabendazolo
Buccia non edibile



In contrast to the US results, we observed a consistent association between processed meat consumption and total mortality but not between red meat consumption and total mortality. Processed meats such as sausages, salami and bacon have a higher content of saturated fatty acids and cholesterol than fresh red meat; the latter is often consumed after removing the visible fat tissue, whereas the proportion of fat in sausages often reaches 50% of the weight or even more. Both high saturated fat and cholesterol intake have been found to be related to the risk of coronary heart disease [2]. Also, processed meat is treated by salting, curing, or smoking in order to improve the durability of the food and/or to improve color and taste. These processes, however, lead to an increased intake of carcinogens or their precursors (polycyclic aromatic hydrocarbons, heterocyclic aromatic amines, nitrosamines) or to a high intake of specific compounds possibly enhancing the development of carcinogenic processes (for example, nitrite).

Rohrmann et al. *BMC Medicine* 2013, 11:63
http://www.biomedcentral.com/1741-7015/11/63



RESEARCH ARTICLE

Open Access

Meat consumption and mortality - results from the European Prospective Investigation into Cancer and Nutrition

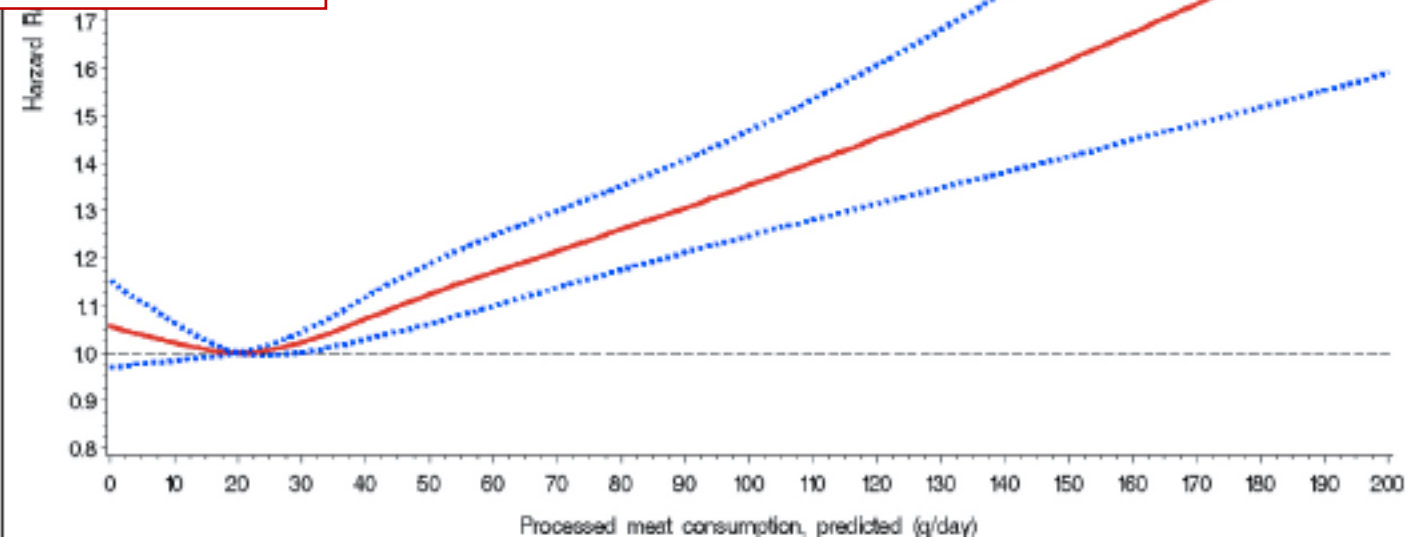
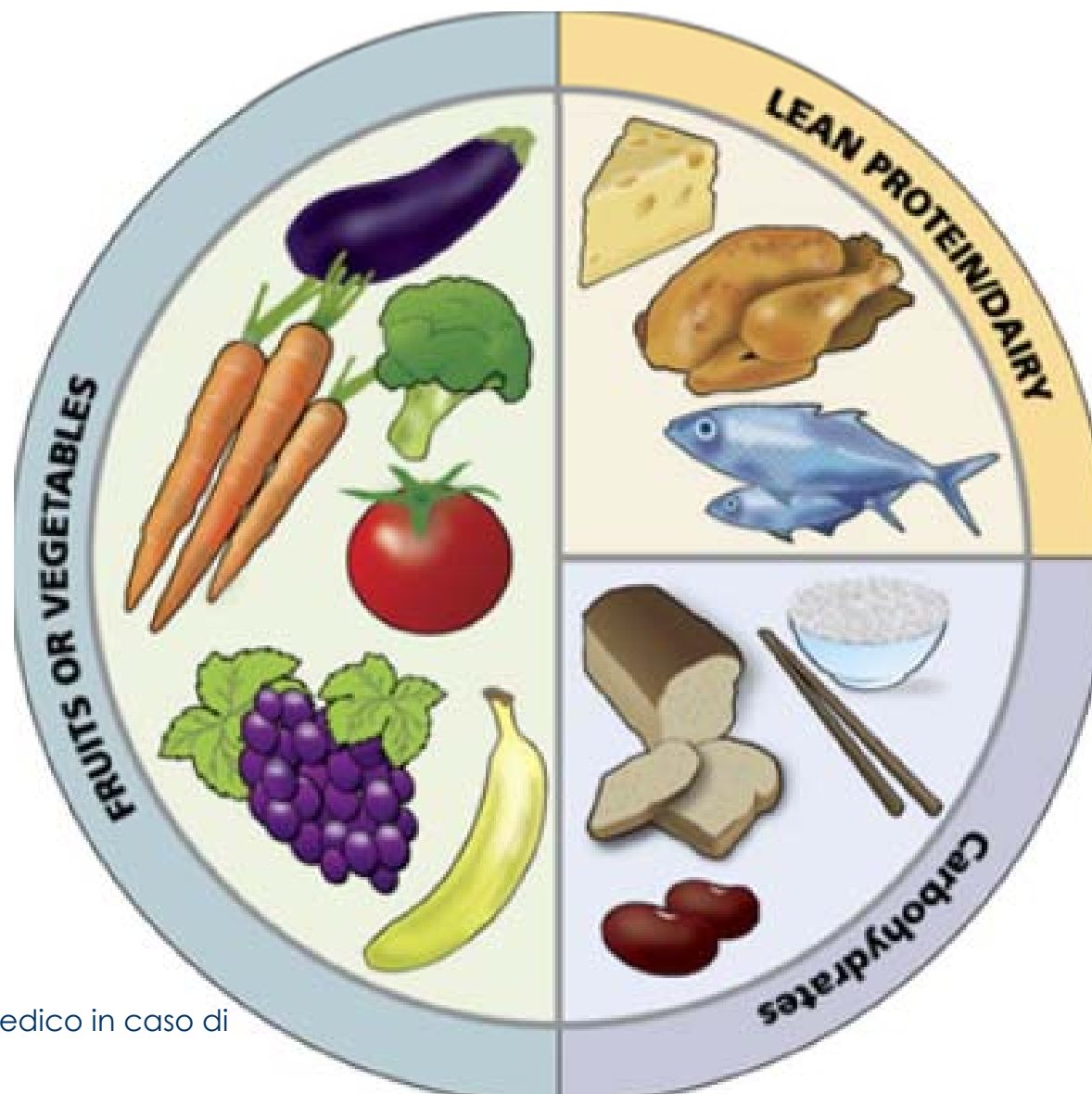


Figure 1 Nonparametric regression curve for the relation of processed meat intake at recruitment with all-cause mortality, European Prospective Investigation into Cancer and Nutrition (EPIC), 1992-2009. Solid line, effect estimate; dotted lines, 95 percent confidence interval.



ALIMENTAZIONE SANA



Verificare con il proprio medico in caso di patologie/sintomi

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ALIMENTAZIONE

OK: frutta, verdura, noci,
olio, carboidrati integrali,
legumi, yogurt, latticini,
uova, carni bianche

NO: carni rosse lavorate,
carboidrati raffinati, amidi,
zuccheri, cibi ad alto
contenuto di sodio, cibi
contenenti grassi industriali

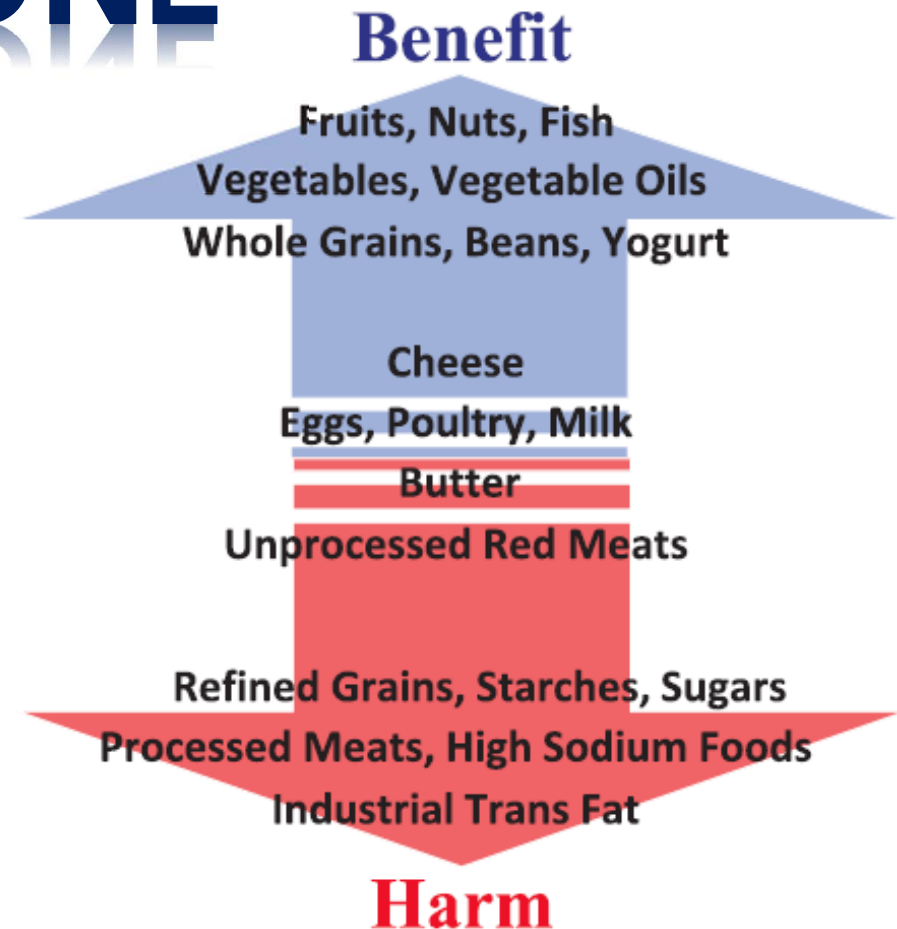


Figure 3. Evidence-based dietary priorities for cardiometabolic health. The placement of each food/factor is based on its net effects on cardiometabolic health, across all risk pathways and clinical end points, and the strength of the evidence, as well. For dietary factors not listed (eg, coffee, tea, cocoa), the current evidence remains insufficient to identify these as dietary priorities for either increased or decreased consumption (see Table 3).



(*Circulation*. 2016;133:187-225.

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Obesity decreases both whole muscle and fascicle strength in young females but only exacerbates the aging-related whole muscle level asthenia

Physiol Rep, 2 (6), 2014, e12030,
doi: 10.14814/phy2.12030

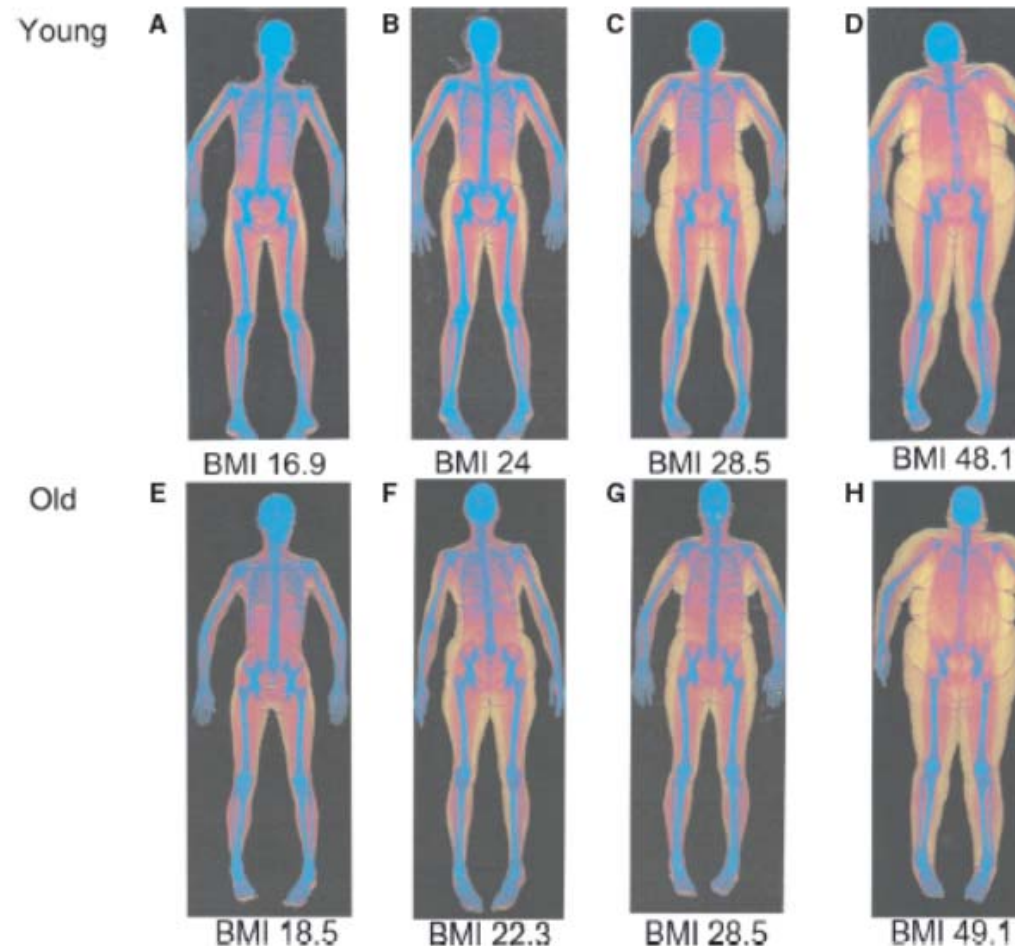
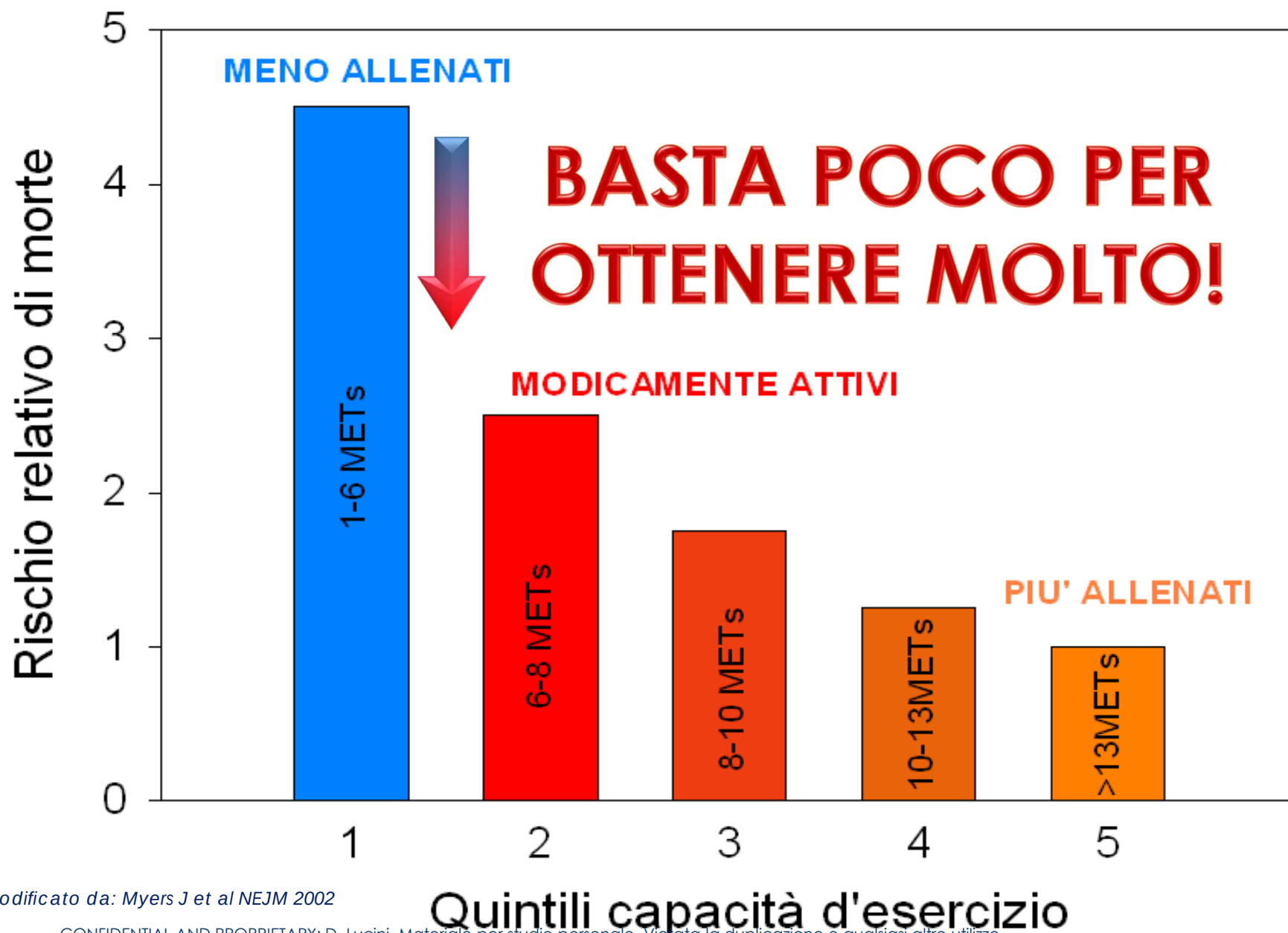


Figure 1. Representative dual energy x-ray absorptiometry (DEXA) scans of a (A) young underweight female, (B) young normal weight female, (C) young overweight female, (D) young obese female, (E) old underweight female, (F) old normal weight female, (G) old overweight female and (H) old obese female. Color key: blue for bone; red for lean tissue; yellow for adipose tissue.







Modificato da: Myers J et al NEJM 2002

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ESERCIZIO FISICO

ESERCIZIO AEROBICO

30 min di attività aerobica moderata la maggior parte, preferibilmente tutti, i giorni della settimana; oppure 20 min di attività aerobica vigorosa 3 volte alla settimana. Particolarmente utile la combinazione tra attività moderata e vigorosa

Esercizio di forza: 2 volte/settimana ad intensità moderata

Nelson ME et al. Circulation 2007

ACSM's Guidelines for Exercise e prescription 2006

ACSM's Exercise is Medicine. A clinician's guide to exercise prescription 2009

Consumo energetico $\cong$ 1000 Kcal/settimana

rischio mortalità per tutte le cause ridotto 20-30%



ESERCIZIO

Fabbisogno energetico

Soggetti che svolgono esercizio fisico sino a 30-40 min/die x 3 volte sett **NON** necessitano di aumentare l'introito calorico, soprattutto se desiderano perdere peso

Non così per veri atleti!
Es: Spesa energetica Tour de France= 12000 Kcal/die



Table 1: Energy requirements for physical activity³

Physical activity level	kcal/kg/day	kcal/day
General physical activity 30-40 minutes/day, 3 times a week	Normal diet, 25-35	1 800-2 400 ^a
Moderate levels of intense training 2-3 hours/day, 5-6 times a week ^b	50-80	2 500-8 000 ^c
High-volume intense training 3-6 hours/day, 1-2 sessions/day, 5-6 times a week ^b	50-80	2 500-8 000 ^c
Elite athletes ^d	150-200	Up to 12 000 ^e
Large athletes ^d	60-80	6 000-12 000 ^f

a: Values estimated for a 50-80 kg individual

b: Moderate levels of intense training use lower level of range, high-volume intense training uses upper level of range

c: Values estimated for a 50-100 kg individual

d: Depending on training periodisation, and the volume and intensity of training

e: Values estimated for a 60-80 kg athlete

f: Values estimated for a 100-150 kg athlete

Review Article: Sport nutrition: A review of the latest guidelines for exercise and sport nutrition

Sport nutrition: A review of the latest guidelines for exercise and sport nutrition from the American College of Sport Nutrition, the International Olympic Committee and the International Society for Sports Nutrition

Polgietter S, BSc/Dietetics, MNutrition
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Keywords: sport nutrition, guidelines, International Olympic Committee, International Society for Sports Nutrition

S Afr J Clin Nutr 2013;26(1):6-16





Caloric Restriction Delays Disease Onset and Mortality in Rhesus Monkeys

Ricki J. Colman, *et al.*
Science **325**, 201 (2009);
DOI: 10.1126/science.1173635

ALIMENTAZIONE RICCA ALIMENTAZIONE SANA

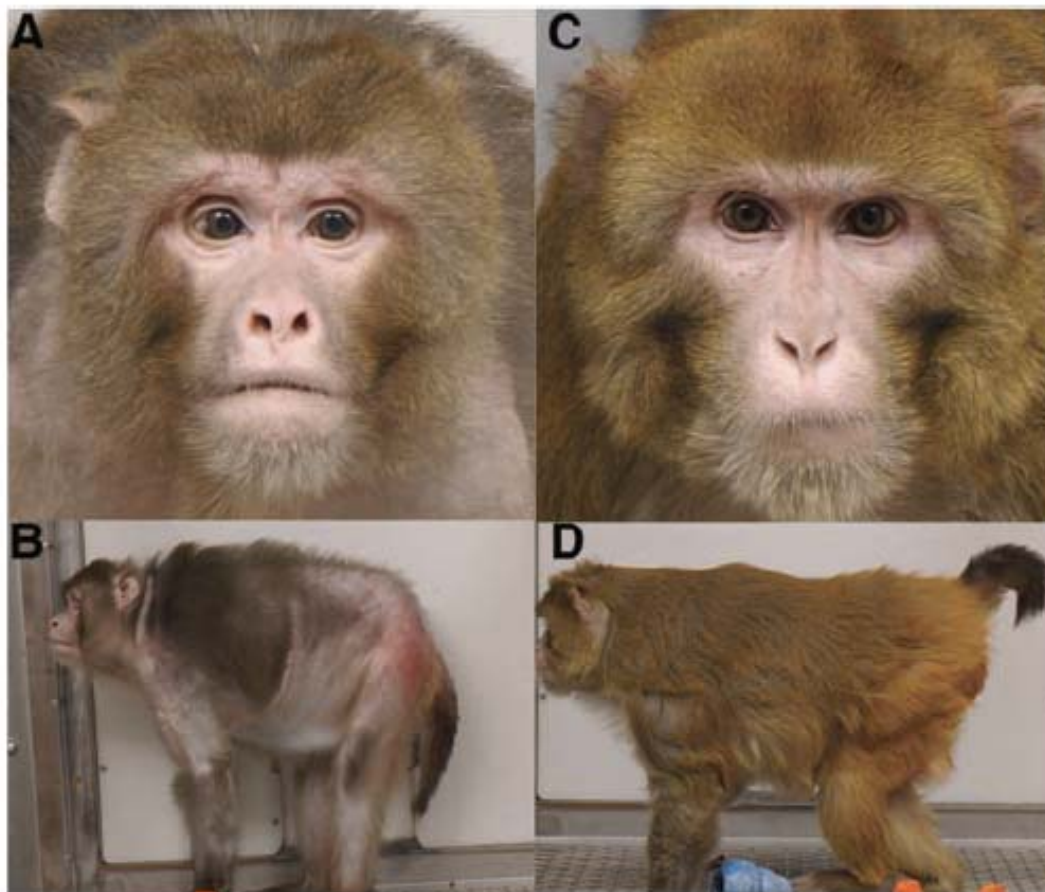


Fig. 1. Animal appearance in old age. (A and B) Photographs of a typical control animal at 27.6 years of age (about the average life span). (C and D) Photographs of an age-matched animal on CR.

STILE DI VITA

**Strumento di sostenibilità per politiche sulla Salute
e per Salute individuale**



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A bouquet of white daisies with one red daisy, set against a light blue background. The text "Grazie per l'attenzione" is overlaid on the right side of the image.

**Grazie per
l'attenzione**