Dott.ssa Silvia Briganti

NUTRIRE IL CUORE

Linee Guida sulla Dieta
e sul Lifestyle

Table 1. The 'big-five' components of the healthy lifestyle, with contributions of the various components to give protection from risk of death, with and the proposed mechanisms of action. Note that the missing 21% is probably stress related. From Opie,[1] page 33.

Lifestyle: 'big five'	*Reduced all-cause death risk (%)*	*Mechanism*
Non-smoking	28	Protects arteries
Exercise 30 min or more daily	17	Slows the heart rate, lowers BP
Ideal weight	14	Less toxic chemicals released from fat cells
Ideal diet	13	High unsaturated fatty acids, high vegetables and fruit, low red meat
Modest alcohol	7	Red wine preferred, contains melatonin
All five	79	Remaining 21% may be stress related

Is there an ideal diet?

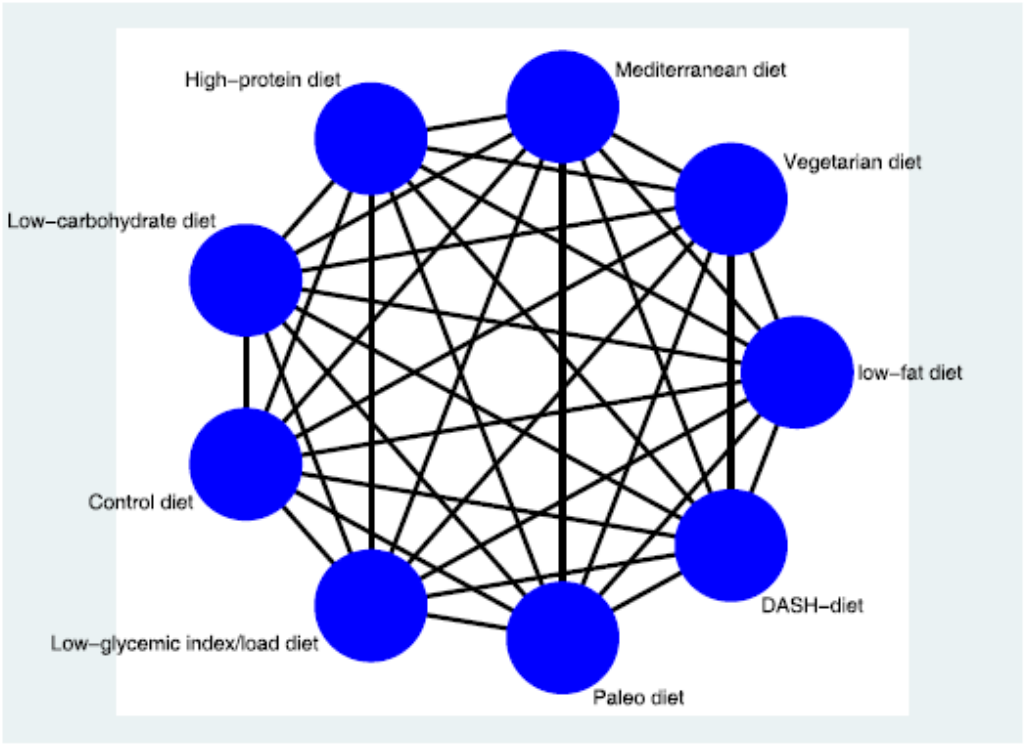


Fig. 1 Network of all possible pairwise comparisons between the eligible dietary factors

Summary: low-carbohydrate diet

Allows 50 to 100 g/day; < 40% calories from carbohydrates[18,20]

- Foods: higher in protein (meat, poultry, fish, shellfish, eggs, cheese, nuts, seeds); higher in fat (oils, butter, olives, avocados); low-carbohydrate vegetables (green salad, cucumber, broccoli, squash)
- Avoid: rice, pasta, bread
- Weight loss: rapid, 11.4 kg over 6 months reported[24–27]
- Hemoglobin A1c: reduced 1.4% in 6 months, or 0% to 2.2%[18,24]
- Cardiovascular: lower triglyceride, higher high-density lipoprotein cholesterol[18]
- Weight regain: rapid, 6 months
- Challenges: limits important nutrients; monitor renal function, protein intake

Summary: low-glycemic diet

Foods with glycemic index < 55

- Foods: whole wheat, rye, pita breads; oats, brown rice, couscous; muesli, bulgur; most fruits; nonstarchy vegatables
- Weight loss: none; −0.32 kg[30]
- Hemoglobin A1c: reduced 0.5%[29]
- Cardiovascular: undetermined
- Weight regain: undetermined
- Challenges: limits important nutrients; glycemic index varies with preparation and among individuals

Sandouk Z et al, cleveland clinic journal of medicine volume 84 • supplement 1 july 2017

Summary: low-fat diet

Allows < 30% calories from fat

- Foods: whole wheat, rye, pita breads; oats, brown rice, couscous; muesli, bulgur; most fruits; nonstarchy vegatables
- Avoid: saturated and trans fats
- Weight loss: 5.3 kg in 6 months,[37] 11% in 1 year[38]
- Hemoglobin A1c: minimal to none
- Cardiovascular: lower low-density lipoprotein cholesterol and triglyceride, higher high-density lipoprotein cholesterol[37]
- Weight regain: 4% at 2 years[38]
- Challenges: differentiating types of fat, avoiding saturated and trans fats

Summary: very-low-calorie diet

Provides 400 to 800 calories daily with meal replacements[39]

- Foods: meal replacements such as Optifast, SlimFast shakes
- Weight loss: 1.4 to 2.5 kg/week[39]; 16.1% over 12.7 weeks[40]
- Hemoglobin A1c: reduced 0.9% over 12 weeks[41]
- Cardiovascular: little effect[42]
- Weight regain: 62% at 5 years[40]
- Challenges: close monitoring by professionals required; requires meal replacements; low adherence rate

Sandouk Z et al. cleveland clinic journal of medicine volume 84 • supplement 1 july 2017

Summary: Mediterranean diet

Focuses on 30% to 40% calories from monounsaturated fats

- Foods: olive oil, fresh fruits and vegetables, cereals, beans, nuts, seeds, limited dairy, limited eggs and red meat, wine moderately with meals
- Weight loss: 7.4 kg in 1 year[43]
- Hemoglobin A1c: reduced 0.4% to 0.6%[43,47]; lower incidence type 2 diabetes[46]
- Cardiovascular: systolic blood pressure reduced 7.1 mm Hg; reduced high-density lipoprotein cholesterol ration of .2645
- Weight regain: less, 0.5 kg over 2 years[44]
- Challenges: slower weight loss but higher adherence rate

Summary: high-protein diet

Includes > 30% calories from protein sources

- Foods: low-fat cottage cheese, cheese, tofu, red meat, chicken, peanut butter, fish, lentils
- Weight loss: 5.2 kg (±1.8 kg) in 12 weeks[54]
- Hemoglobin A1c: reduced 0.28%[55]
- Cardiovascular: lower low-density lipoprotein cholesterol, reduction in abdominal fat, no change in high-density lipoprotein cholesterol[54]
- Weight regain: unknown
- Challenges: must be individualized diet accounting for cardiometabolic risk and renal profile

Sandouk Z et al, cleveland clinic journal of medicine volume 84 • supplement 1 july 2017

Per ottenere la compliance del paziente è importante concentrare le indicazioni su nutrienti a proposito dei quali esista una convincente letteratura, lasciando altri aspetti del pattern dietetico alle preferenze individuali

Cosa mettere nel piatto?

- Grassi
- Carboidrati e zuccheri
- Sale
- Fibra

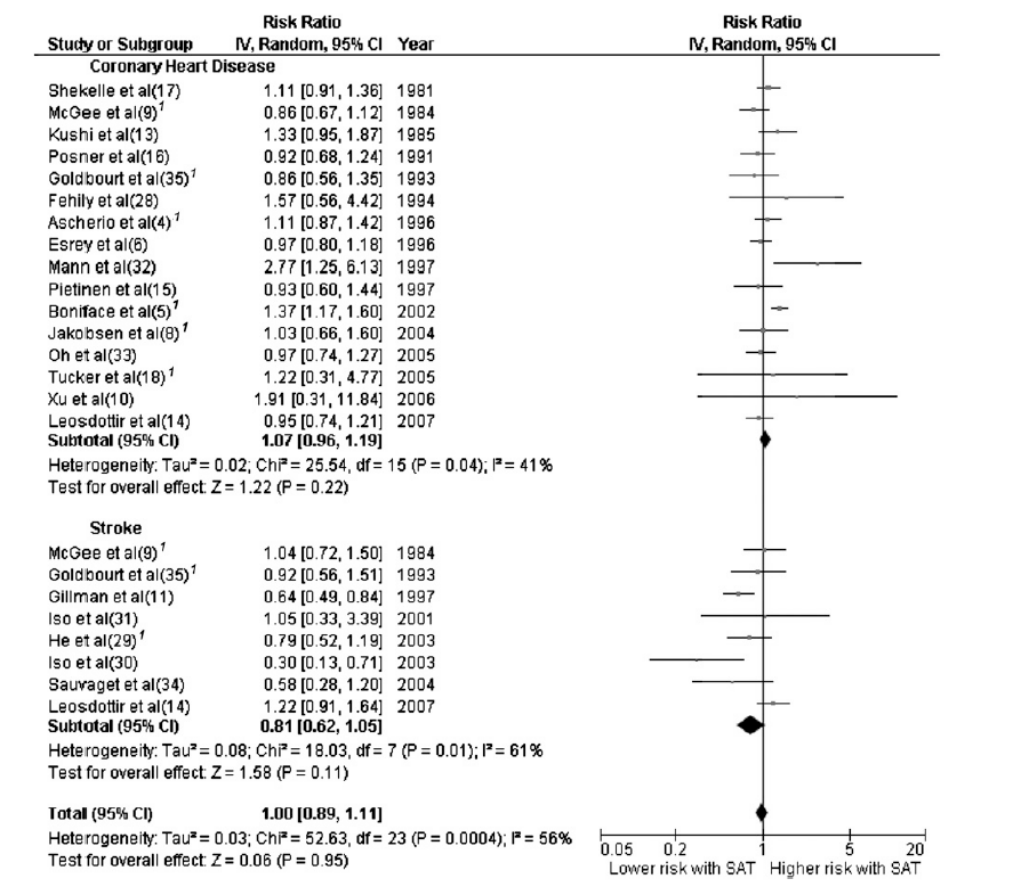
I GRASSI

Recenti metanalisi hanno dimostrato come moderare i grassi nella dieta non migliori sensibilmente né il profilo del rischio cardiovascolare né il peso.

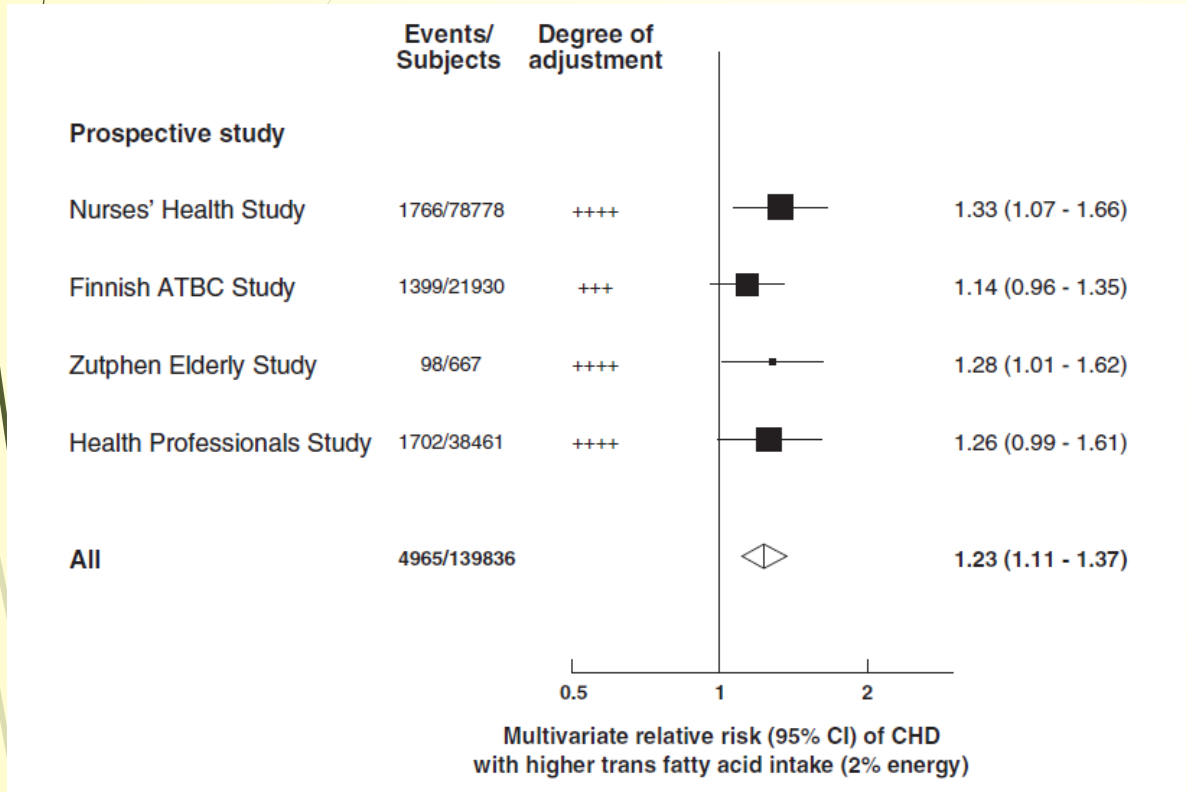
Dunque dobbiamo considerare i singoli grassi all'interno della nostra alimentazione

	Associazione con il rischio CV	
	Visione del 2000	**Visione del 2015**
Grassi totali	++	=
Grassi saturi	++	+
Grassi insaturi *trans*	++	+++
Monoinsaturi	–	=
Polinsaturi omega-6	–	––
Polinsaturi omega-3	––	––

- Grassi saturi
- Considerati da sempre responsabili della concentrazione plasmatica di LDL
- Vanno limitati senza demonizzare alcuni cibi che possono avere potenziali effetti benefici
- ES: latte e derivati



Siri Tarino SW et al Am J Clin Nutr 2010; 9, 535-46



- Ac grassi insaturi *trans* di origine industriale (margarine)
- Su etichette vengono chiamati «grassi vegetali parzialmente idrogenati»
- Evidenze → azione pro-infiammatoria – disfunzione endoteliale – incremento delle LDL e incremento delle HDL

Mozaffarian D et al Eur j Cli Nutr 2009; 63, S5-S21

- **ACIDI GRASSI MONOINSATURI**
- Olive oil consumption, specifically the extra-virgin variety, is associated with reduced risks of cardiovascular disease and mortality in individuals at high cardiovascular risk.

This distinction is important because EVOO contains much higher amounts of polyphenols than common olive oil. These polyphenols may have cardiovascular benefits beyond the lipid profile.

- For each 10 g/d increase in extra-virgin olive oil consumption, cardiovascular disease and mortality risk decreased by 10% and 7%, respectively

Table 2 Risk of cardiovascular events and mortality according to baseline total olive oil intake

	Energy-adjusted tertiles of total olive oil, g/day				
	1 (low) (n = 2,405)	2 (n = 2,406)	3 (high) (n = 2,405)	*P for trend*	Energy-adjusted total olive oil intake (10 g/d)
Mean total olive oil intake	**21.4 ± 8.00**	**38.8 ± 11.6**	**56.9 ± 10.8**		
Major event					
Cardiovascular event, % (n)	4.5 (108)	3.6 (86)	3.5 (83)		3.8 (277)
Multivariable model 1	1 (Ref.)	0.76 (0.57, 1.02)	0.66 (0.48, 0.90)	0.01	0.87 (0.81, 0.94)
Multivariable model 2	1 (Ref.)	0.78 (0.58, 1.04)	0.64 (0.46, 0.87)	0.01	0.87 (0.81, 0.94)
Multivariable model 3	1 (Ref.)	0.78 (0.58, 1.04)	0.65 (0.47, 0.89)	0.01	0.87 (0.81, 0.94)
Cardiovascular mortality	**1 (low) (n = 2,405)**	**2 (n = 2,406)**	**3 (high) (n = 2,405)**	***P for trend***	
Cardiovascular mortality, % (n)	1.4 (33)	1.0 (25)	1.0 (23)		1.1 (81)
Multivariable model 1	1 (Ref.)	0.68 (0.39, 1.16)	0.52 (0.29, 0.94)	0.04	0.83 (0.72, 0.96)
Multivariable model 2	1 (Ref.)	0.70 (0.41, 1.20)	0.51 (0.28, 0.92)	0.04	0.83 (0.72, 0.95)
Multivariable model 3	1 (Ref.)	0.69 (0.40, 1.18)	0.52 (0.29, 0.93)	0.04	0.84 (0.73, 0.96)

Olive oil intake and risk of cardiovascular disease and mortality in the PREDIMED Study. BMC Medicine 2014

ACIDI GRASSI POLINSATURI

- Total PUFA, omega-6 and omega-3 PUFA (as percentage of whole blood fatty acids) were significantly lower in MI patients than in matched controls, whereas saturated and monounsaturated fatty acids were higher in cases.

Daily nutrient intake in the studied population. Data are expressed as g/day, if not otherwise indicated (mean, standard deviation).

	Cases	SD	Controls	SD	*p*
Subjects	(86)		(72)		
Energy (kcal/day)	2246	819	2101	851	0.28
Water	1180	597	1200	554	0.83
Proteins (total)	88.2	33.1	83.5	28.9	0.35
Animal	58.6	25.6	56.8	22.6	0.63
Vegetable	29.6	12.3	26.7	11.8	0.14
Lipids (total)	81.3	31.0	80.8	37.6	0.93
Animal	48.4	23.6	45.9	24.5	0.53
Vegetable	33.0	13.9	34.9	16.5	0.44
Saturated	28.6	12.6	28.1	14.6	0.79
Monounsaturated	38.7	14.5	38.9	17.4	0.92
Oleic acid	35.7	13.3	36.3	16.1	0.80
Polyunsaturated	9.3	3.9	9.2	4.4	0.83
Linoleic acid	7.1	3.0	7.0	3.6	0.88
Alpha linolenic acid	1.1	0.5	1.1	0.5	0.99
Other PUFA	1.1	0.5	1.0	0.7	0.56
Cholesterol (mg/day)	379.7	177.1	363.9	174.1	0.57
Carbohydrates (total)	284.5	124.0	257.3	112.9	0.15
Starches	175.6	84.7	148.3	73.5	0.03
Soluble	108.6	65.6	108.6	60.3	0.99
Fiber	18.0	7.2	18.2	7.2	0.89
Alcohol	13.4	19.8	10.5	13.8	0.29

Acidi Grassi Essenziali-Infarto Miocardico Study

Odds ratios of myocardial infarction and corresponding 95% confidence intervals (CI) by tertiles of FA classes (percentage levels) in whole blood adjusted for education, body mass index (BMI), smoking habit and matching variables.

	Tertiles		OR	CI 95%	Trend *p*
SFA	1	40.81			
	2	43.78	1.53	0.72–3.27	
	3	47.37	2.25	0.96–5.27	0.064
MUFA	1	25.18			
	2	28.36	1.15	0.50–2.64	
	3	31.90	1.95	0.77–4.90	0.106
PUFA	1	23.21			
	2	27.45	0.27	0.10–0.79	
	3	31.58	0.14	0.05–0.40	0.001
Total n-6	1	21.28			
	2	25.03	0.2	0.06–0.60	
	3	28.62	0.15	0.05–0.44	0.003
Total n-3	1	1.70			
	2	2.35	0.52	0.21–1.28	
	3	3.33	0.37	0.15–0.90	0.042
n-6/n-3	1	7.99			
	2	10.71	1.58	0.77–3.25	
	2	14.05	1.79	0.81–3.97	0.092

MI infarction risk significantly decreased with increasing levels of total PUFA (OR: 0.14) and of total omega-6 and omega-3 (OR: 0.15 and 0.37, respectively).

Marangoni F et al Atherosclerosis 232 (2014) 334e338

Baseline characteristics of the participants by quintile of egg-yolk years.

Egg-yolk years	Quintile of egg-yolk years					*p*
	<50	50–110	110–150	150–200	≥200	
Normally distributed variables: mean ± SD						
Age at first visit	55.70 ± 17.03	57.97 ± 16.32	56.82 ± 12.35	64.55 ± 12.00	69.77 ± 11.38	0.0001
Eggs per week	0.41 ± 0.44	1.37 ± 0.54	2.30 ± 0.53	2.76 ± 0.59	4.68 ± 3.03	0.0001
Systolic pressure (mmHg)	141 ± 24	139 ± 24	142 ± 22	144 ± 22	145 ± 23	0.001
Diastolic pressure (mmHg)	83 ± 12	82 ± 12	85 ± 13	82 ± 13	80 ± 13	0.001
Total cholesterol (mmol/L)	4.93 ± 1.16	4.94 ± 1.17	5.0 ± 1.14	4.90 ± 1.16	4.81 ± 1.19	0.47
Triglycerides (mmol/L)	1.88 ± 1.41	1.84 ± 1.08	1.96 ± 1.31	1.94 ± 1.40	1.85 ± 1.17	0.77
HDL cholesterol (mmol/L)	1.34 ± 0.48	1.33 ± 0.42	1.33 ± 0.42	1.29 ± 0.42	1.35 ± 0.45	0.58
LDL cholesterol (mmol/L)	2.76 ± 1.04	2.75 ± 1.02	2.81 ± 1.09	2.73 ± 1.19	2.67 ± 1.06	0.62
Body mass index	27.62 ± 5.62	27.42 ± 5.53	28.71 ± 9.91	27.00 ± 4.81	26.31 ± 4.48	0.001
Plaque area (mm^2)	101.45 ± 125.64	110.35 ± 129.02	113.58 ± 138.82	135.76 ± 137.67	175.77 ± 147.61	0.0001
Age-dependent variables: age-adjusted marginal mean ± SE						
Smoking (pack-years)	14.14 ± 1.37	14.37 ± 1.40	16.57 ± 1.25	13.88 ± 1.30	17.00 ± 1.20	0.24
Categorical variables: percent						
Female	48.6%	51.7%	44.8%	45.0%	46.7%	0.56
Diabetic	11.8%	14.5%	11.8%	13.4%	14.6%	0.80

Ruolo del colesterolo pre-formato:

- modesta correlazione con la colesterolemia
- soggetti con pattern «sintetico» assorbono in modo ridotto il colesterolo a livello intestinale quindi l'effetto di una dieta ricca di colesterolo è modesto

UOVA (colina)

GUT Microbiota

Trimetilamina (TMA)

Liver

TMAO

Spence, Atherosclerosis 2012

CARBOIDRATI

Fattori che influenzano l'indice glicemico	Fattori che riducono l'indice glicemico
Fibra alimentare	Fibra viscosa (guar, psillium, beta-glucano)
Natura dell'amido	Alto rapporto amilosio/amilopectina
Tipo di zucchero	Fruttosio, lattosio
Trattamento dell'alimento	Raffreddamento dopo la cottura
Macronutrienti	Contenuto elevato in proteine/grassi
Altri composti	Acidi organici (aceto, yogurt)

Importanza, anche in questo caso, alla qualità

Il rischio cardiovascolare e quello metabolico sono ridotti in soggetti con dieta a basso indice glicemico – importanza data alla modulazione della glicemia post-prandiale

Table 2 Glycemic index (GI) in European dietary reference values (DRVs).

EU country	DRV on GI
France	The 2004 document from the French Agency ANSES concluded that the level of evidence is insufficient to provide indications on GI based on health benefits for the general population and prohibited the use of GI labeling or any derived measures [173].
Germany	The recently issued German Nutrition Society DRV document reports that: "*to date there is only possible evidence regarding a risk-increasing effect of high Glycaemic Index on some nutrition-related diseases. Therefore, no recommendations are made in that respect*" [174].
Nordic Countries	Nordic Nutrition Recommendations 2012 conclude that "*There is not enough evidence that choosing foods with low Glycaemic Index will decrease the risk of chronic diseases in the population overall. However, there is suggestive evidence that ranking food based on their Glycaemic Index might be of use for overweight and obese individuals*" [175].
Italy	The recently issued DRVs from the Italian Society of Human Nutrition, included under "*Suggested Dietary Targets*" generic qualitative indications on preference for low-Glycemic Index foods when intakes of carbohydrates approach the upper limit of intake, i.e. 60% energy. They also specified the need of preferentially selecting low GI foods provided the GI was not reduced by adding fructose and/or fat [176].
UK	The Scientific Advisory Committee on Nutrition (SACN) has recently attempted a comprehensive opinion on carbohydrate and health. The document, a compromise between DRVs and Food-Based dietary Guidelines for the UK population, was published for public consultation at the end of June 2014 [177]. The Committee concludes that "*it is not possible to assign cause-effect relationships for outcomes based on variation in diet Glycaemic Index or Load, as higher or lower GI and GL diets differ in many ways other than just the carbohydrate fraction*".

Augustin L.S.A. et al Nutrition, Metabolism, Cardiovascular Disease 2015; 25, 795-815

Cochrane Library

Cochrane Database of Systematic Reviews

Low glycaemic index diets for the prevention of cardiovascular disease (Review)

Clar C, Al-Khudairy L, Loveman E, Kelly SAM, Hartley L, Flowers N, Germanò R, Frost G, Rees K

Cochrane Database of Systematic Reviews 2017, Issue 7. Art. No.: CD004467.
DOI: 10.1002/14651858.CD004467.pub3.

Main results

Twenty-one RCTs were included, with a total of 2538 participants randomised to low GI intervention (1288) or high GI (1250). All 21 **included studies reported the effect of low GI diets on risk factors for cardiovascular disease, including blood lipids and blood pressure**.

None of the included studies reported the effect of low GI dietary intake on cardiovascular mortality and cardiovascular events such as fatal and nonfatal myocardial infarction, unstable angina, coronary artery bypass graft surgery, percutaneous transluminal coronary angioplasty, and stroke.

Authors' conclusions

There is currently no evidence available regarding the effect of low GI diets on cardiovascular disease events.

Moreover, there is currently no convincing evidence that low GI diets have a clear beneficial effect on blood lipids or blood pressure parameters.

ZUCCHERI

Saccarosio
-50%glucosio
-50%fruttosio
Indice glicemico basso

What is already known on this topic

Excessive intakes of dietary sugars have been linked to obesity, and a higher risk of chronic diseases, but the link with obesity is tenuous

The most consistent association has been between a high intake of sugar sweetened beverages and the development of obesity

No upper safe limit of intake has been agreed universally, but WHO has suggested that intakes of free sugars should be less than 10% of the total energy intake

What this study adds

Among free living people, advice to reduce free sugars was associated with an average 0.80 kg reduction in weight; advice to increase intake was associated with a corresponding 0.75 kg increase

This parallel effect seems to be due to an altered energy intake; isoenergetic replacement of sugars with other carbohydrates did not result in any change in body weight

Lisa Te Morenga et al, BMJ 2012; 345:e7492

COMMENT

ECOLOGY How elephants could reduce fire risk in Australia p.30 | NEUROSCIENCE The source of the self in the brain's wiring p.31 | LITERATURE How Charles Dickens drew on science, but left room for wonder p.32 | OBITUARY Philip Lawley and the discovery that DNA damage can cause cancer p.36

ILLUSTRATION BY MARK SMITH

The toxic truth about sugar

Added sweeteners pose dangers to health that justify controlling them like alcohol, argue **Robert H. Lustig, Laura A. Schmidt** and **Claire D. Brindis.**

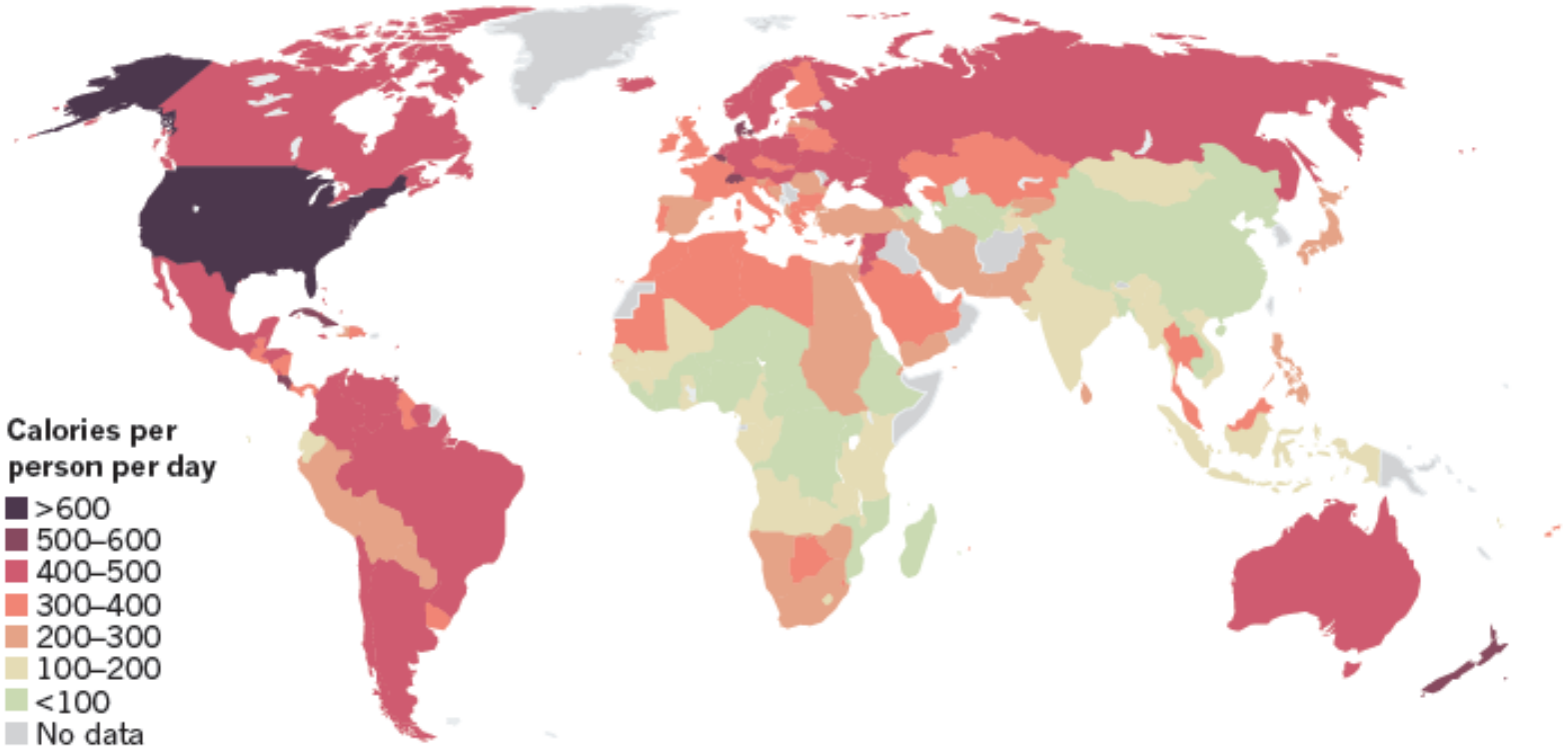
DEADLY EFFECT
Excessive consumption of fructose can cause many of the same health problems as alcohol.

Chronic ethanol exposure	Chronic fructose exposure
Haematological disorders	
Electrolyte abnormalities	
Hypertension	Hypertension (uric acid)
Cardiac dilatation	
Cardiomyopathy	Myocardial infarction (dyslipidaemia, insulin resistance)
Dyslipidaemia	Dyslipidaemia (*de novo* lipogenesis)
Pancreatitis	Pancreatitis (hypertriglyceridaemia)
Obesity (insulin resistance)	Obesity (insulin resistance)
Malnutrition	Malnutrition (obesity)
Hepatic dysfunction (alcoholic steatohepatitis)	Hepatic dysfunction (non-alcoholic steatohepatitis)
Fetal alcohol syndrome	
Addiction	Habituation, if not addiction

Source: ref. 1

THE GLOBAL SUGAR GLUT

Global sugar supply (in the form of sugar and sugar crops, excluding fruit and wine) expressed as calories per person per day, for the year 2007.

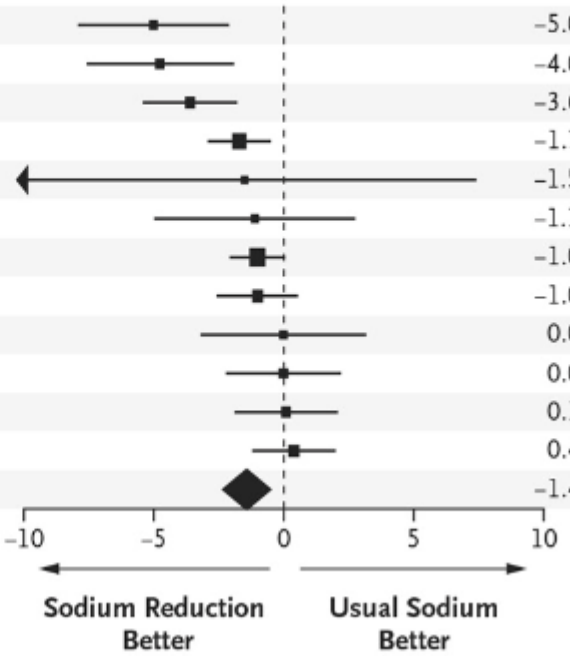


SALE

In Italia consumo >10 g/die

Study	No. of Patients	Baseline Systolic Blood Pressure (mm Hg)	BMI	Sodium Reduction (mmol)	Mean Difference, mm Hg (95% CI)	Study Weight (%)
Dickinson, 2009	29	116	31	92	−5.00 (−7.86 to −2.14)	6.1
DASH, 2001	54	129	29	77	−4.00 (−6.35 to −1.65)	7.7
Mascioli, 1991	48	131	28	71	−3.60 (−5.36 to −1.84)	10.0
TOHP (I), 1992	744	125	28	44	−1.70 (−2.86 to −0.54)	12.7
Puska, 1983	38	131	26	90	−1.50 (−10.36 to 7.36)	1.0
Nowson, 2009	59	131	30	44	−1.10 (−4.92 to 2.72)	4.1
TOHP (II), 1997	1190	128	31	42	−1.00 (−2.02 to 0.02)	13.4
Jessani, 2008	184	122	25	81	−1.00 (−2.51 to 0.51)	11.1
Damgaard, 2006	12	120	28	129	0.00 (−3.14 to 3.14)	5.5
Chiolero, 2000	12	116	22	201	0.00 (−2.16 to 2.16)	8.4
HPT, 1990	351	124	29	23	0.10 (−1.84 to 2.04)	9.2
Nowson, 2003	91	131	25	90	0.40 (−1.17 to 1.97)	10.8
Overall	2812	125	28	82	−1.44 (−2.34 to −0.54)	100.0

Heterogeneity: $chi^2=53.09$, $df=12$ ($P<0.001$); $I^2=77\%$
Test for overall effect: $Z=7.07$ ($P<0.001$)



N Engl J Med 2014; 371:2134-213

Cochrane Library

Cochrane Database of Systematic Reviews

Reduced dietary salt for the prevention of cardiovascular disease (Review)

Adler AJ, Taylor F, Martin N, Gottlieb S, Taylor RS, Ebrahim S

Advice to reduce salt showed small reductions in systolic blood pressure (mean difference (MD) -1.15 mmHg, 95% CI -2.32 to 0.02 n=2079) and diastolic blood pressure (MD -0.80 mmHg, 95% CI -1.37 to -0.23 n=2079) in normotensives and greater reductions in systolic blood pressure in hypertensives (MD -4.14 mmHg, 95% CI -5.84 to -2.43 n=675), but no difference in diastolic blood pressure (MD -3.74 mmHg, 95% CI -8.41 to 0.93 n=675).

Consiglia 2,3 g di sodio/die – 6 g di sale/die
Al di sotto non ci sono evidenze che possa ridurre il rischio cardiovascolare

Mol. Nutr. Food Res. 2015, *59*, 139–146

Fiber consumption and all-cause, cardiovascular, and cancer mortalities: A systematic review and meta-analysis of cohort studies

Table 2. Pooled hazard risk (HR) and 95% CI of studies assessing the association between fiber consumption and mortality

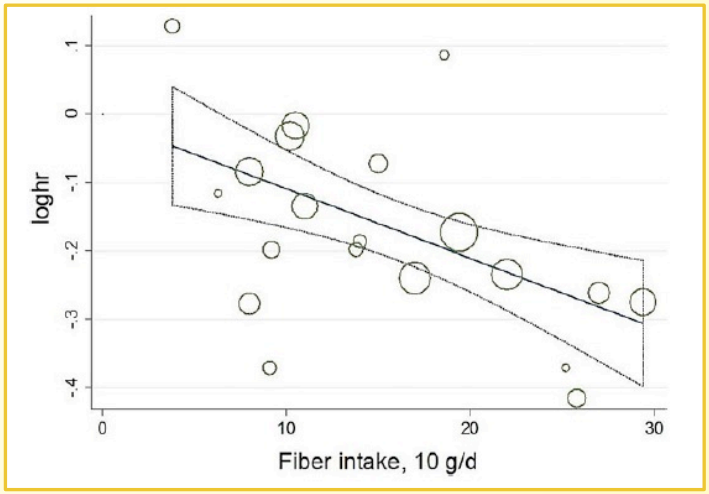
Mortality	*n*	HR, CI 95%		
		Low	Moderate	High
All cohorts	42	1	0.82 (0.79, 0.84)	0.72 (0.68, 0.76)
All-cause mortality				
All	9	1	0.84 (0.80, 0.87)	0.77 (0.73, 0.81)
Men	4	1	0.81 (0.73, 0.90)	0.73 (0.66, 0.79)
Women	2	1	0.83 (0.81, 0.85)	0.79 (0.75, 0.83)
Cancer mortality				
All	5	1	0.90 (0.88, 0.93)	0.83 (0.74, 0.91)
Men	2	1	0.91 (0.88, 0.95)	0.82 (0.76, 0.89)
Women	2	1	0.89 (0.86, 0.93)	0.88 (0.74, 1.02)
Total CVD mortality				
All	16	1	0.86 (0.82, 0.91)	0.77 (0.72, 0.81)
TDF	10	1	0.87 (0.82, 0.93)	0.77 (0.72, 0.82)
SDF	3	1	0.84 (0.76, 0.93)	0.75 (0.59, 0.90)
IDF	3	1	0.86 (0.72, 1.00)	0.76 (0.64, 0.88)
Circulatory diseases mortality	2	1	0.81 (0.76, 0.87)	0.75 (0.59, 0.90)

CVD, cardiovascular diseases; IDF, insoluble dietary fiber; SDF, soluble dietary fiber; TDF, total dietary fiber.

Riduzione della mortalità in coloro che consumano più fibre:

- 23% CVD
- 17% cancer
- -23% all-causes

Riduzione progressiva del rischio all'aumentare del quantitativodi fibra nella dieta



European Guidelines on cardiovascular disease prevention in clinical practice

The Fifth Joint Task Force of the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice (constituted by representatives of nine societies and by invited experts)

Recommendation regarding nutrition

Recommendations	Class[a]	Level[b]	GRADE	Ref[c]
A healthy diet is recommended as being the cornerstone of CVD prevention.	I	B	Strong	270–276

CVD = cardiovascular disease.
[a]Class of recommendation.
[b]Level of evidence.
[c]References.

4.3 Nutrition

Key messages

- A healthy diet has the following characteristics:

- Saturated fatty acids to account for <10% of total energy intake, through replacement by polyunsaturated fatty acids.
- Trans-unsaturated fatty acids: as little as possible, preferably no intake from processed food, and <1% of total energy intake from natural origin.
- <5 g of salt per day.
- 30–45 g of fibre per day, from wholegrain products, fruits, and vegetables.
- 200 g of fruit per day (2–3 servings).
- 200 g of vegetables per day (2–3 servings).
- Fish at least twice a week, one of which to be oily fish.
- Consumption of alcoholic beverages should be limited to two glasses per day (20 g/day of alcohol) for men and one glass per day (10 g/day of alcohol) for women.

- Energy intake should be limited to the amount of energy needed to maintain (or obtain) a healthy weight, i.e. a BMI $<25\ kg/m^2$.
- In general, when following the rules for a healthy diet, no dietary supplements are needed.


DIETARY
GUIDELINES
FOR AMERICANS
2015-2020
EIGHTH EDITION
USDA
DietaryGuidelines.gov

The Guidelines

1. **Follow a healthy eating pattern across the lifespan.** All food and beverage choices matter. Choose a healthy eating pattern at an appropriate calorie level to help achieve and maintain a healthy body weight, support nutrient adequacy, and reduce the risk of chronic disease.

2. **Focus on variety, nutrient density, and amount.** To meet nutrient needs within calorie limits, choose a variety of nutrient-dense foods across and within all food groups in recommended amounts.

3. **Limit calories from added sugars and saturated fats and reduce sodium intake.** Consume an eating pattern low in added sugars, saturated fats, and sodium. Cut back on foods and beverages higher in these components to amounts that fit within healthy eating patterns.

4. **Shift to healthier food and beverage choices.** Choose nutrient-dense foods and beverages across and within all food groups in place of less healthy choices. Consider cultural and personal preferences to make these shifts easier to accomplish and maintain.

5. **Support healthy eating patterns for all.** Everyone has a role in helping to create and support healthy eating patterns in multiple settings nationwide, from home to school to work to communities.

1

Follow a healthy eating pattern across the lifespan. All food and beverage choices matter. Choose a healthy eating pattern at an appropriate calorie level to help achieve and maintain a healthy body weight, support nutrient adequacy, and reduce the risk of chronic disease.

Follow a healthy eating pattern over time to help support a healthy body weight and reduce the risk of chronic disease.

A Healthy Eating Pattern Includes:

- Fruits
- Vegetables
- Protein
- Dairy
- Grains
- Oils

A Healthy Eating Pattern Limits:

- Saturated Fats & *Trans* Fats
- Added Sugars
- Sodium

2

Focus on variety, nutrient density, and amount. To meet nutrient needs within calorie limits, choose a variety of nutrient-dense foods across and within all food groups in recommended amounts.

Choose a variety of nutrient-dense foods from each food group in recommended amounts.

Example Meal:

- Lettuce & Celery — Vegetables
- Whole-Grain Bread — Grains
- Apples & Grapes — Fruits
- Fat-Free Milk — Dairy
- Chicken Breast & Unsalted Walnuts — Protein
- Mayonnaise — Oils

3

Limit calories from added sugars and saturated fats and reduce sodium intake. Consume an eating pattern low in added sugars, saturated fats, and sodium. Cut back on foods and beverages higher in these components to amounts that fit within healthy eating patterns.

Consume an eating pattern low in added sugars, saturated fats, and sodium.

Example Sources of:

4

Shift to healthier food and beverage choices. Choose nutrient-dense foods and beverages across and within all food groups in place of less healthy choices. Consider cultural and personal preferences to make these shifts easier to accomplish and maintain.

Replace typical food and beverages choices with more nutrient-dense options. Be sure to consider personal preferences to maintain shifts over time.

Example:

Meal A **Meal B**

5

Support healthy eating patterns for all. Everyone has a role in helping to create and support healthy eating patterns in multiple settings nationwide, from home to school to work to communities.

Ministero delle Politiche
Agricole e Forestali

INRAN
Istituto Nazionale
di Ricerca per gli Alimenti
e la Nutrizione

LINEE GUIDA PER UNA SANA ALIMENTAZIONE ITALIANA

revisione 2003

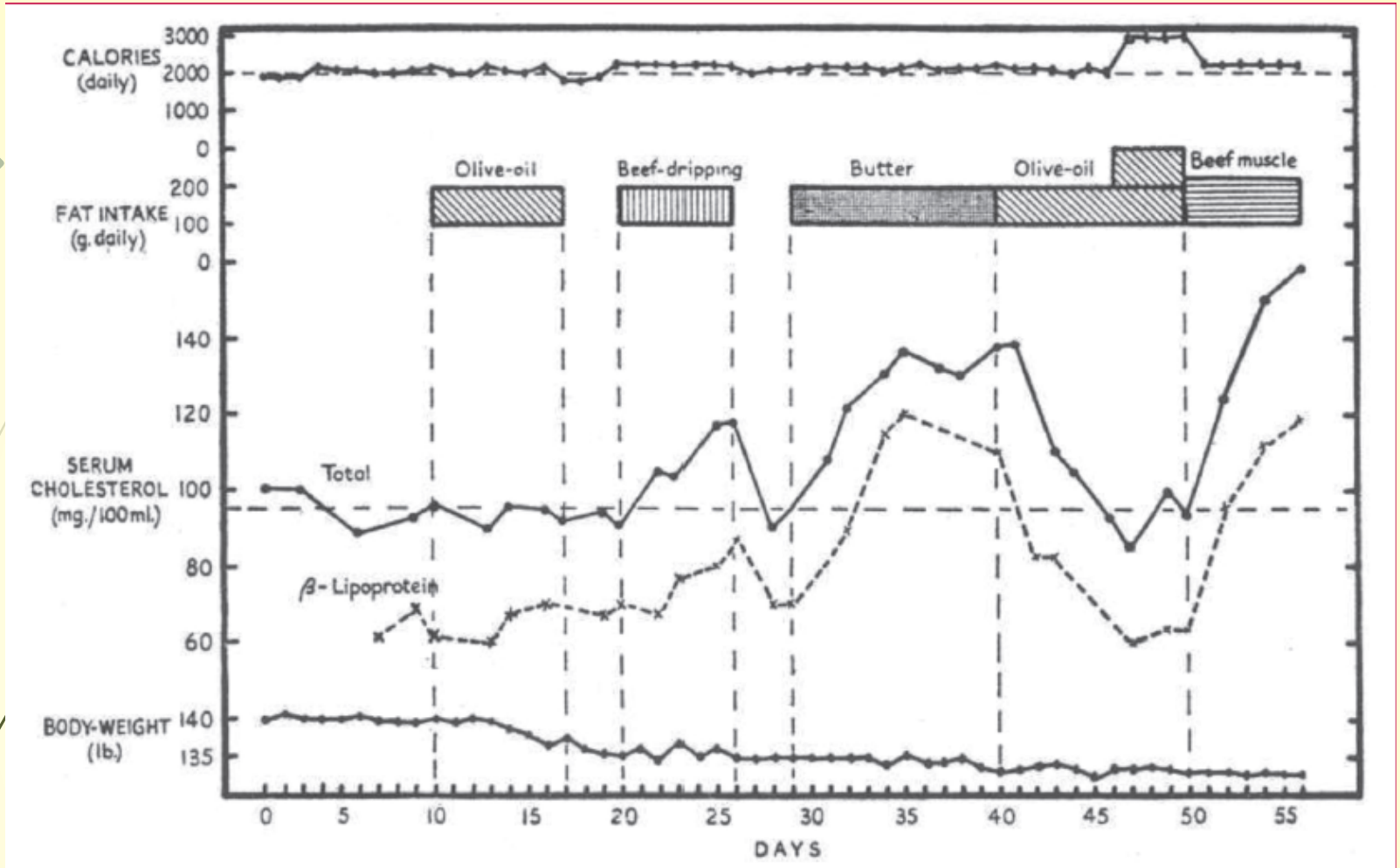


Fig 1. A historical study in Cape Town. The effect of dietary fats on blood lipid levels and their relation to ischaemic heart disease, neutralised by the effect of added olive oil. Note the rapid rise in serum cholesterol levels with the provision of the high-butter diet. All values were obtained in the Metabolic Unit, University of Cape Town, South Africa. From Bronte-Stewart.[14]

12. Bronte-Stewart B, Keys A, Brock JF. Serum-cholesterol, diet, and coronary heart disease; an inter-racial survey in the Cape Peninsula. *Lancet* 1955; **269**: 1103–1108.
13. Bronte-Stewart B, Antonis A, Eales AA, Brock JF. Effects of feeding different fats on serum-cholesterol levels. *Lancet* 1956; **270**: 521.