

INTERVENCIÓN CON DIETA MEDITERRÁNEA: EVIDENCIAS CIENTÍFICAS Y PRÁCTICA CLÍNICA

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The Blue-Zones, National Geographic



Características Comunes de las “Blue Zones”

- Factores genéticos – ApoE-e4
- Estilo de vida:
 - Alimentación: Semivegetarismo
 - Actividad física constante
 - Familia y entorno social
 - Actitud positiva
 - No hábitos tóxicos: Tabaco



INFORME BLOOMBERG 2023

ÍNDICE DE SALUD GLOBAL

DEFINICIÓN: ÍNDICES DE SALUD (A) – FACTORES DE RIESGO PARA LA SALUD (B)

- ÍNDICES DE SALUD (A):
1. **MORTALIDAD** global.
 2. **ESPERANZA DE VIDA** AL NACER, INFANCIA, JUVENTUD Y JUBILACIÓN.
 3. PROBABILIDAD DE **SOBREVIVENCIA** NEONATAL-JUVENTUD, MADUREZ Y JUBILACIÓN.
- FACTORES DE RIESGO (B):
1. **FACTORES CONDUCTUALES/ ENDÓGENOS** COMO INCIDENCIA POBLACIONAL DE HIPERTENSIÓN DIABETES, HIPECOLESTEROLEMIA, PREVALENCIA DE SOBREPESO, TABAQUISMO, CONSUMO DE ALCOHOL, INACTIVIDAD FÍSICA, MALNUTRICIÓN INFANTIL, ASÍ COMO SALUD MENTAL Y VACUNACIÓN.
 2. **FACTORES AMBIENTALES / EXÓGENOS** COMO ACCESO DE LA POBLACIÓN AL AIRE LIMPIO, AGUA Y SERVICIOS HIGIÉNICOS.

1. ESPAÑA



2. ITALIA



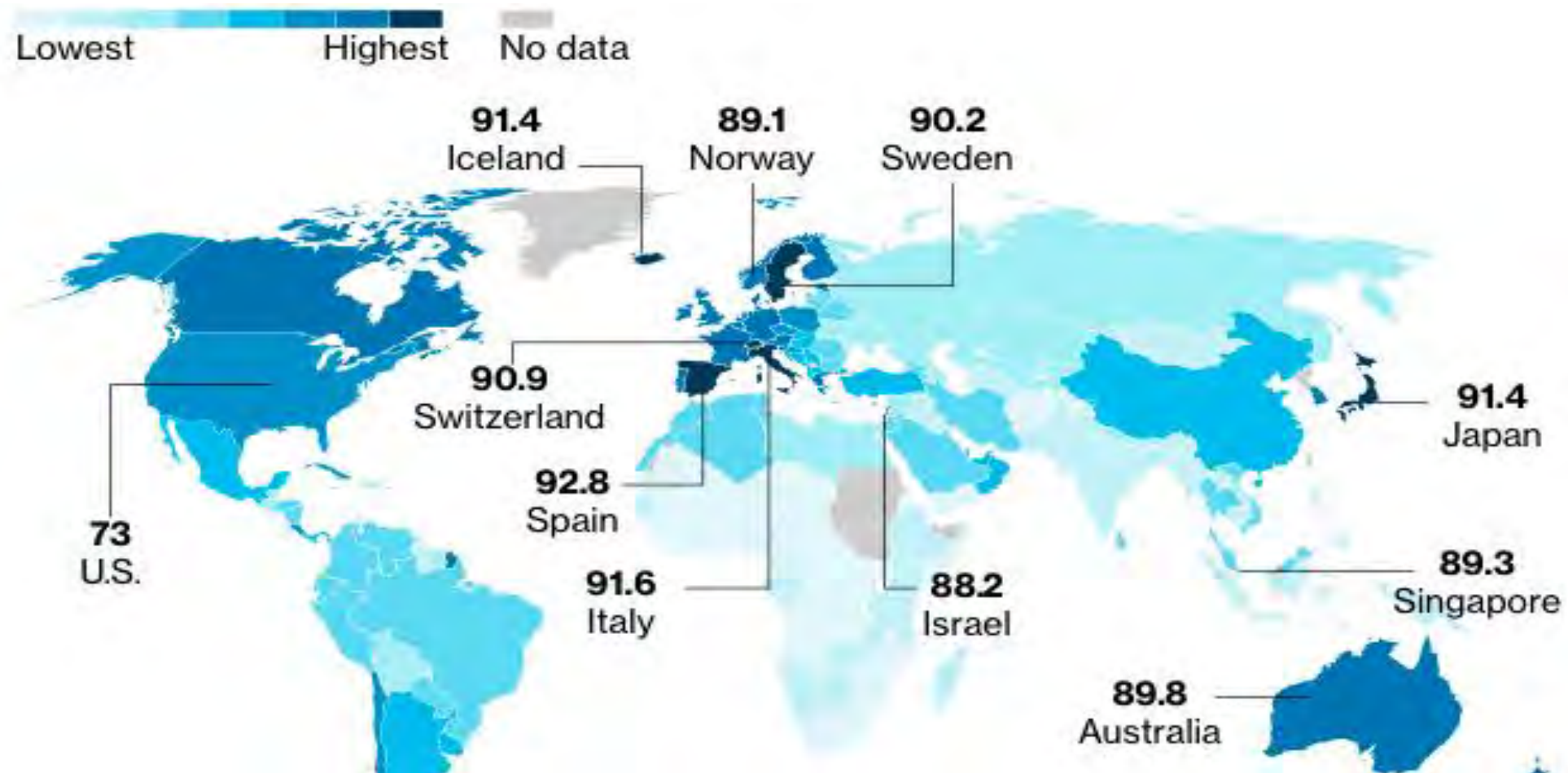
3. ISLANDIA



5. SUIZA



ÍNDICE DE SALUD GLOBAL BLOOMBERG



RANKING 2023 de BLOOMBERG

2019 Rank	2017 Rank	Change	Economy	Health Grade	Health Score	Health Risk Penalties
1	6	+5	Spain	92.75	96.56	-3.81
2	1	-1	Italy	91.59	95.83	-4.24
3	2	-1	Iceland	91.44	96.11	-4.67
4	7	+3	Japan	91.38	95.59	-4.21
5	3	-2	Switzerland	90.93	94.71	-3.78
6	8	+2	Sweden	90.24	94.13	-3.89
7	5	-2	Australia	89.75	93.96	-4.21
8	4	-4	Singapore	89.29	93.19	-3.90
9	11	+2	Norway	89.09	93.25	-4.16
10	9	-1	Israel	88.15	92.01	-3.86
11	10	-1	Luxembourg	87.39	92.03	-4.64
12	14	+2	France	86.94	91.70	-4.76
13	12	-1	Austria	86.30	90.81	-4.51
14	15	+1	Finland	85.89	90.18	-4.29
15	13	-2	Netherlands	85.86	90.07	-4.21
16	17	+1	Canada	85.70	90.31	-4.61
17	24	+7	S. Korea	85.41	89.48	-4.07
18	19	+1	New Zealand	85.06	89.68	-4.62

RANKING 2021 de BLOOMBERG

23	16	-7	Germany	83.06	88.10	-5.04
24	27	+3	Slovenia	82.72	88.04	-5.32
25	28	+3	Denmark	82.69	86.47	-3.78
26	20	-6	Greece	82.29	86.92	-4.63
27	25	-2	Malta	81.70	86.07	-4.37
28	26	-2	Belgium	80.46	85.29	-4.83
29	30	+1	Czech Rep.	77.59	82.96	-5.37
30	31	+1	Cuba	74.66	79.42	-4.76
31	35	+4	Croatia	73.36	78.46	-5.10
32	38	+6	Estonia	73.32	78.47	-5.15
33	29	-4	Chile	73.21	77.70	-4.49
33	33	0	Costa Rica	73.21	76.88	-3.67
35	34	-1	U.S.	73.02	78.13	-5.11
36	40	+4	Bahrain	72.31	76.96	-4.65
37	36	-1	Qatar	71.97	76.55	-4.58
38	41	+3	Maldives	70.95	75.37	-4.42
39	32	-7	Lebanon	70.53	76.10	-5.57
40	39	-1	Poland	70.25	75.93	-5.68
41	N/A	N/A	Montenegro	69.69	75.62	-5.93
42	42	0	Bosnia & H.	69.66	74.96	-5.30

PATRONES DIETÉTICOS



ORIGINAL RESEARCH ARTICLE

2018

Impact of Healthy Lifestyle Factors on Life Expectancies in the US Population

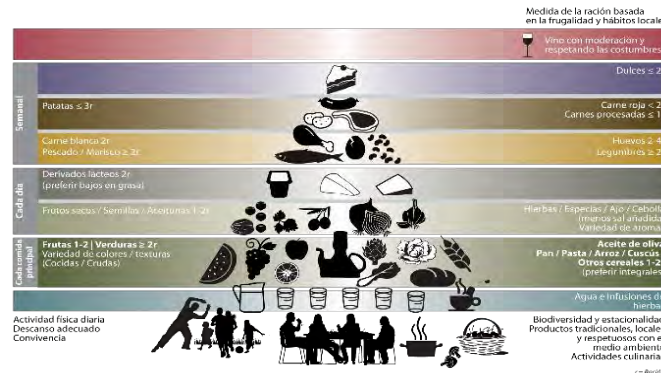
Body Mass Index
(IMC)
18,5-24,9 m²



No Smoking



123,219 subjects followed 35 y.



Healthy Dietary Pattern



≥ 6 h/week

Moderate Alcohol
Consumption
5-14.9 g/day

LIFE EXPECTANCY AT 50 YEARS-OLD
DEPENDING ON ADHERENCE TO A HEALTHY LIFESTYLE

NONE

- Women: + 29.0 years
- Men: + 25.5 years

MAXIMUM

- Women: + 43,1 years
- Men: + 37.6 years

- Moderate Exercise: 150 min/week
- Heavy Exercise: 75 min/week

EXERCISE



- Systolic BP : <120 mmHg
- Diastolic BP: <80 mmHg

MONITOR BLOOD PRESSURE



- Normal cholesterol concentrations reduce atheroma plaques

MONITOR CHOLESTEROL



- Fasting glucemia: <100 mg/dL

REDUCE GLUCEMIA



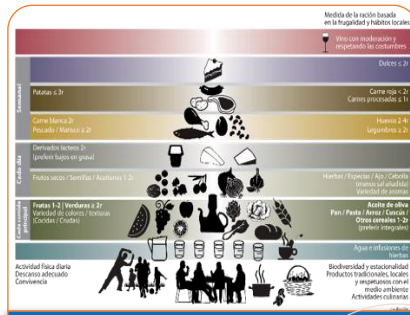
- Maintain a normal body weight

LOSE WEIGHT



- Avoid smoking

NO SMOKING



HEALTHY DIET



AHA – 2023: LIFE'S ESSENTIAL 8





American Heart Association.

Healthy for Good™

HOW TO GET HEALTHY SLEEP



Life's Essential

Getting a good night's sleep every night is vital to cardiovascular health. Adults should aim for an average of 7-9 hours, and babies and kids need more depending on their age. Too little or too much sleep is associated with heart disease, studies show.

✓ LEARN HOW SLEEP AFFECTS YOUR HEALTH

Most adults need 7 to 9 hours of sleep each night. Babies and kids need even more. *Poor sleep may put you at higher risk for:*

- ▶ Cardiovascular disease
- ▶ Cognitive decline and dementia
- ▶ Depression
- ▶ High blood pressure, blood sugar and cholesterol
- ▶ Obesity



✓ LEARN THE BENEFITS OF SLEEP

- ✓ **HEALING** and repair of cells, tissues and blood vessels
- ✓ **STRONGER** immune system
- ✓ **IMPROVED** mood and energy
- ✓ **BETTER BRAIN FUNCTION** including alertness, decision-making, focus, learning, memory, reasoning and problem-solving
- ✓ **LESS RISK** of chronic disease

Learn more at heart.org/lifes8

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TIPS FOR SUCCESS

Clean up your sleep hygiene



MOVE IT.

Charge your device as far away from your bed as possible. Added bonus? The distance may help you feel less overwhelmed in general.



DIM IT.

Dim your screen or use a red filter app at night. The bright blue light of most devices can mess with your circadian rhythm and melatonin production.



SET IT.

Alarms aren't just for waking up – set a bedtime alarm to remind you that it's time to wrap it up for the night.



LOCK IT.

If you've got a scrolling habit you need to kick, try an app-blocking app that makes it impossible to get lost in after-hours emails, social media or gaming.



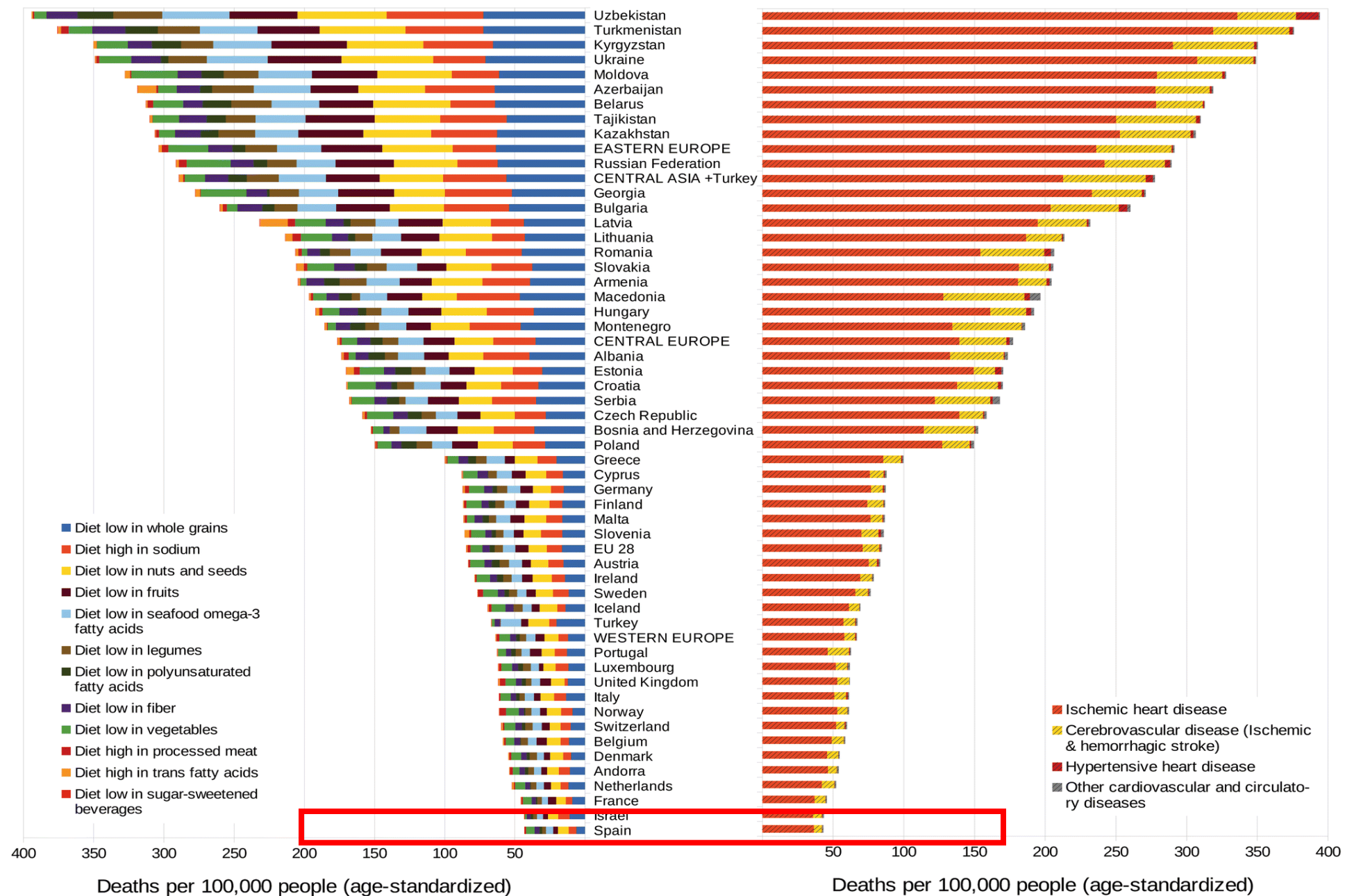
BLOCK IT.

Tell notifications to buzz off if they're waking you up at night. Put your phone on "do not disturb" mode to block it all out when you're trying to sleep.



sea
Sociedad Española
de Arteriosclerosis

MORTALIDAD CARDIOVASCULAR EN SEGÚN PATRÓN DIETÉTICO

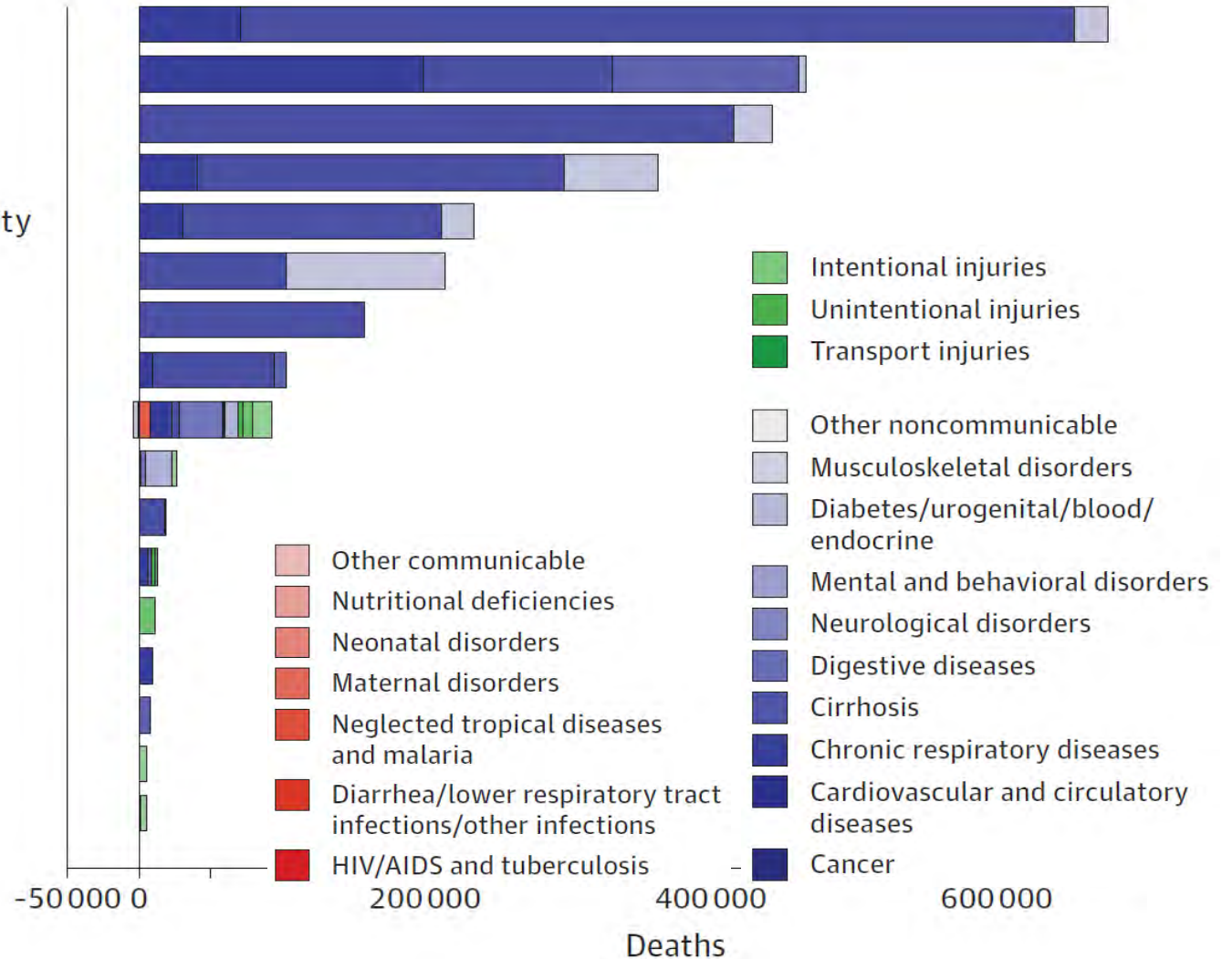


CAMBIANDO NUESTRA DIETA PODEMOS MEJORAR NUESTRA SALUD

Risk Factors

Dietary risks

Tobacco smoking
High blood pressure
High body mass index
Physical inactivity and low physical activity
High fasting plasma glucose
High total cholesterol
Ambient particulate matter pollution
Alcohol use
Drug use
Lead exposure
Occupational risks
Low bone mineral density
Residential radon
Ambient ozone pollution
Intimate partner violence
Childhood sexual abuse



*US Burden of Disease Collaborators,
JAMA 2017*



This horizontal stacked bar chart illustrates the contribution of 20 different risk factors to the global burden of disease, categorized by 20 disease types. The risk factors are listed on the y-axis, and the disease categories are listed on the x-axis. The length of each colored segment within a bar represents the contribution of that risk factor to a specific disease category. The disease categories are: Cardiovascular diseases, Chronic respiratory diseases, Diabetes and kidney diseases, Digestive diseases, Enteric infections, HIV/AIDS and sexually transmitted infections, Maternal and neonatal disorders, Musculoskeletal disorders, Neoplasms, Neurological disorders, Nutritional deficiencies, Other infectious diseases, Other non-communicable diseases, Respiratory infections and tuberculosis, Self-harm and interpersonal violence, Substance use disorders, Transport injuries, Unintentional injuries, and Unspecified diseases. The risk factors are: High systolic blood pressure, Dietary risks, High fasting plasma glucose, Air pollution, High body-mass index, Tobacco, High LDL cholesterol, Kidney dysfunction, Child and maternal malnutrition, Non-optimal temperature, Unsafe water, sanitation, and handwashing, Unsafe sex, Low physical activity, Alcohol use, Other environmental risks, Occupational risks, Low bone mineral density, Drug use, Intimate partner violence, and Childhood sexual abuse and bullying.



PATRONES DIETÉTICOS SALUDABLES

DIETA MEDITERRÁNEA
DIETA NÓRDICA
DIETA *DASH*
DIETA FLEXITARIANA
DIETA VEGETERIANA

DIETA MEDITERRÁNEA

EL MEJOR PATRÓN ALIMENTARIO EN 2023



1

**Aceite de Oliva
Virgen como
Principal Fuente
de Grasa**



2

**Varias Raciones de
Verduras,
Hortalizas, Fruta,
Legumbres y Frutos
secos**



3

El pan y otros
productos cereales
(pasta, arroz, y
otros cereales
integrales)
deberían ser
consumidos a diario



4

Preferencia por
los productos
minima procesados
y mejor si son
frescos y de
producción local



5

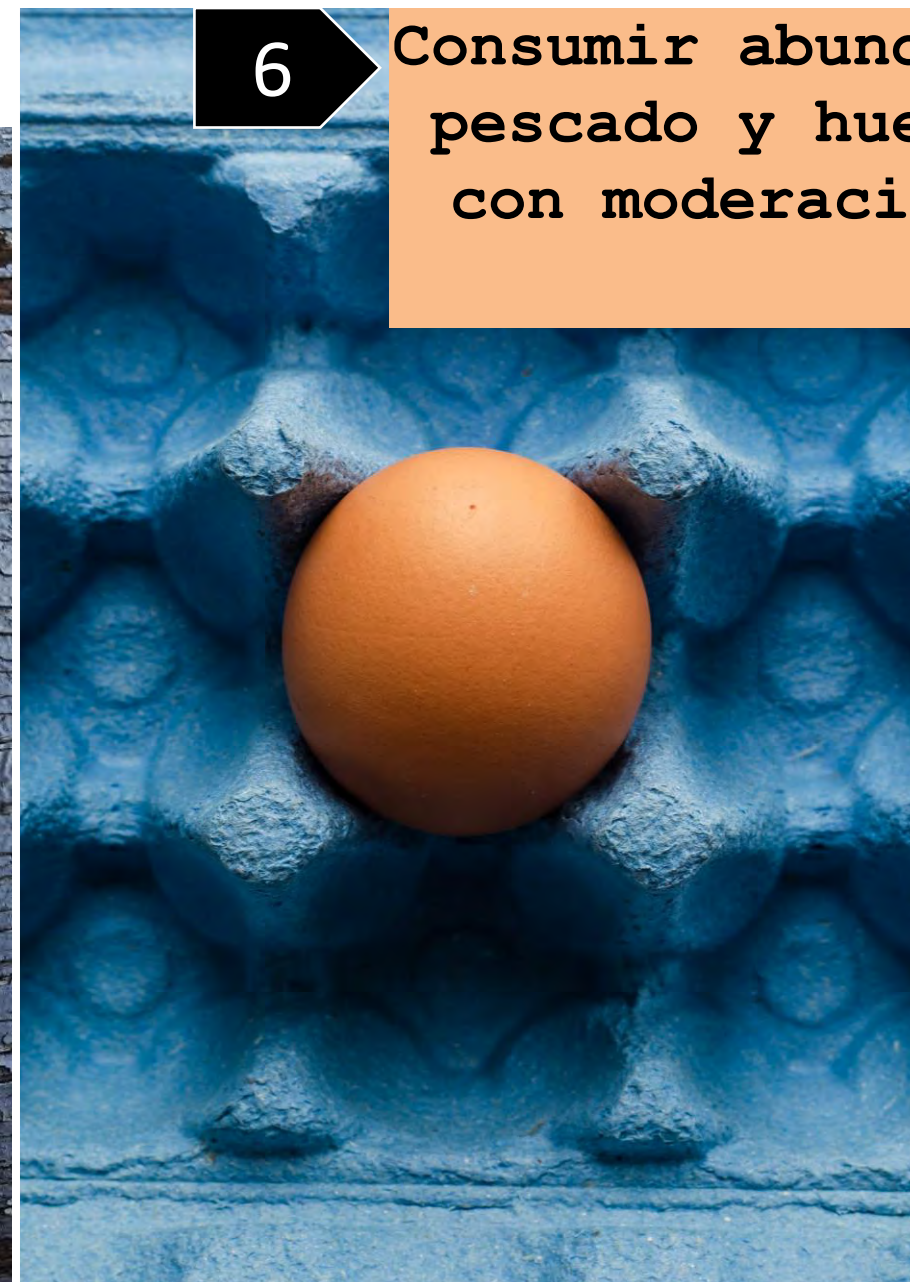
Consumir productos lácteos a diario, principalmente en forma de yogurt y queso





6

Consumir abundante
pescado y huevos
con moderación.



7

El mejor postre diario es la fruta fresca, mientras que los pasteles, dulces y lactose deben consumirse ocasionalmente.



8

La bebida poor
excelencia es el
agua. El vino es un
alimento clave pero
debe consumirse con
moderación y siempre
con las comidas.

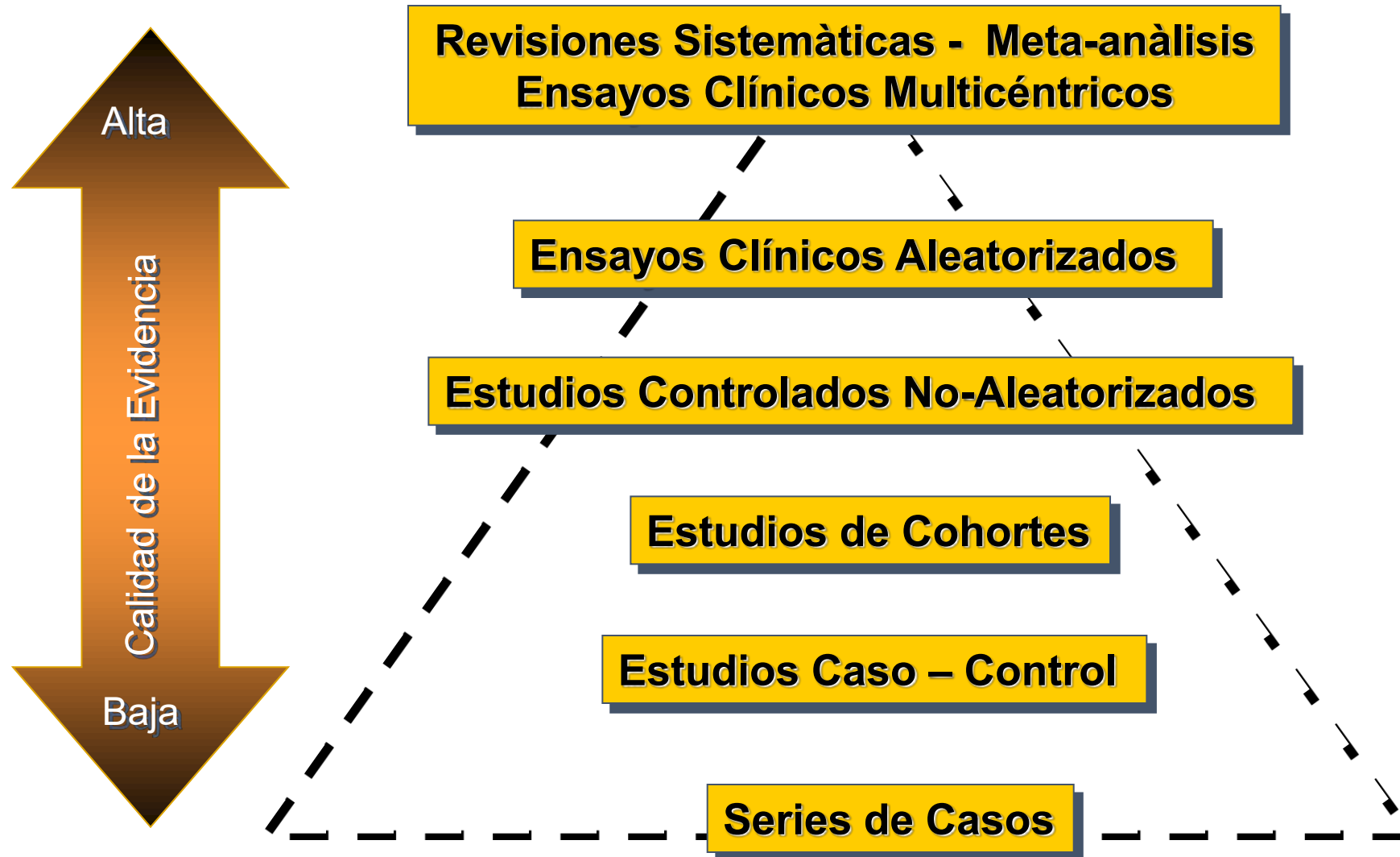


9

La carne roja debe consumirse con moderación y si es posible en guisos con productos vegetales.

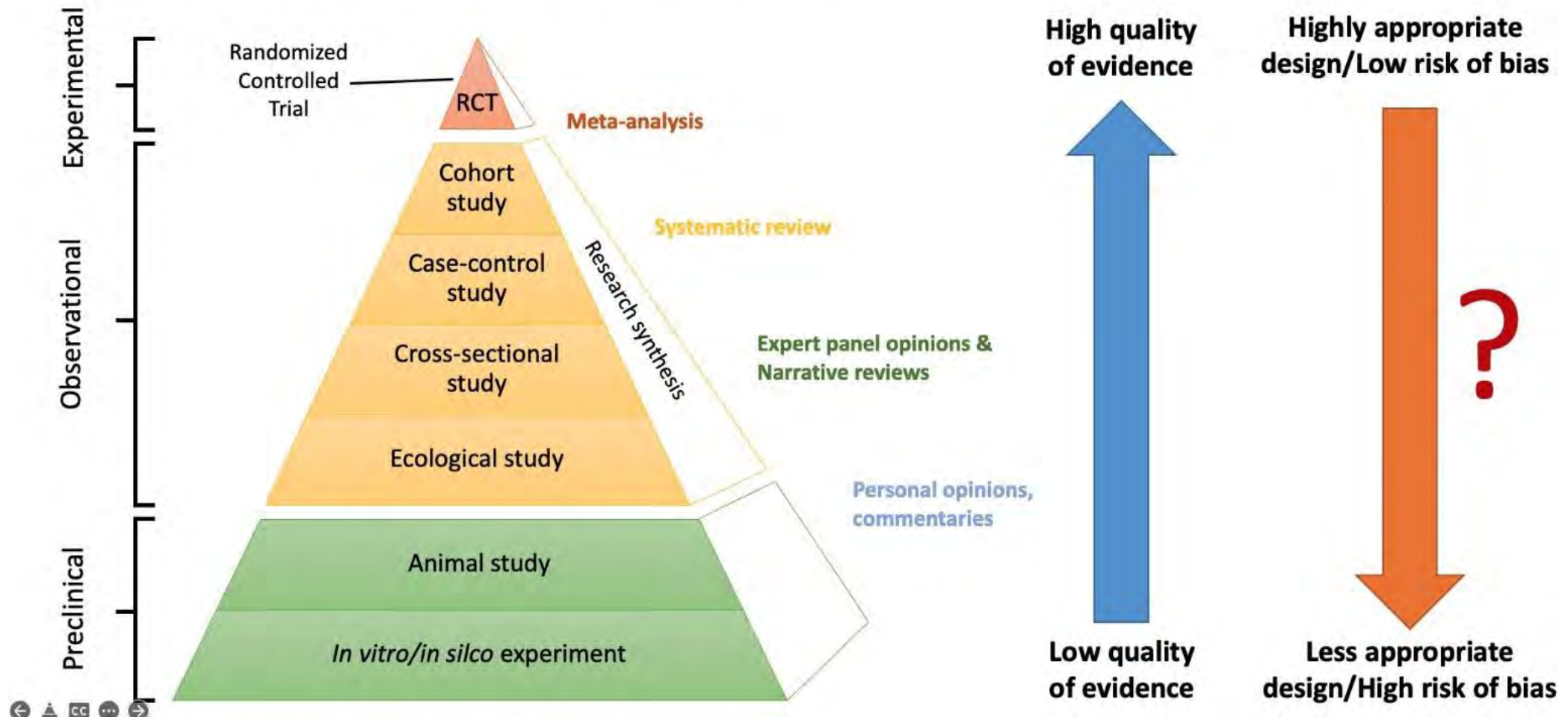


JERARQUÍA DE LA MEDICINA BASADA EN LA EVIDENCIA CIENTÍFICA



JERARQUÍA DE LA MEDICINA BASADA EN LA EVIDENCIA - II

Pyramid of scientific evidence



INTERVENCIÓN NUTRICIONAL

NUTRICIÓN PERSONALIZADA

NUTRICIÓN POBLACIONAL

NUTRICIÓN PLANETARIA

INTERVENCIÓN PERSONALIZADA

TRATAMIENTO DIETÉTICO DE PERSONAS CON ENFERMEDADES ESPECÍFICAS Y AQUÉLLAS QUE NECESITAN UNA ATENCIÓN NUTRICIONAL ESPECIAL

- Errores congénitos del metabolismo
- Alergias e intolerancias alimentarias
- Enfermedades metabólicas
- Etapas de la vida: Edad, Embarazo, Lactancia, ...
- Factores étnicos, culturales y religiosos

DESARROLLO DE INTERVENCIONES PERSONALIZADAS EFECTIVAS PARA MEJORAR LA SALUD PÚBLICA

Recomendaciones Personalizadas basadas en la Historia Clínica, Preferencias e Información Genética

- SLC30A8: Portadoras del Alelo A en el rs 1158471SLC308
- TCF7L2: Portadoras del Alelo T en el rs TCF7L2-rs7903146
- MTHFR: Portadoras del genotipo TT en el MTHRC677T
- **Suplementos de Zn** para mantener la homeostasis de la glucosa (8 mg/d)
- La **Dieta Mediterránea** reduce el riesgo de AVC
- **Suplementos de Vitamina B2 (riboflavina)** reduce el riesgo de HTA

Mediterranean Diet Reduces the Adverse Effect of the *TCF7L2*-rs7903146 Polymorphism on Cardiovascular Risk Factors and Stroke Incidence

A randomized controlled trial in a high-cardiovascular-risk population



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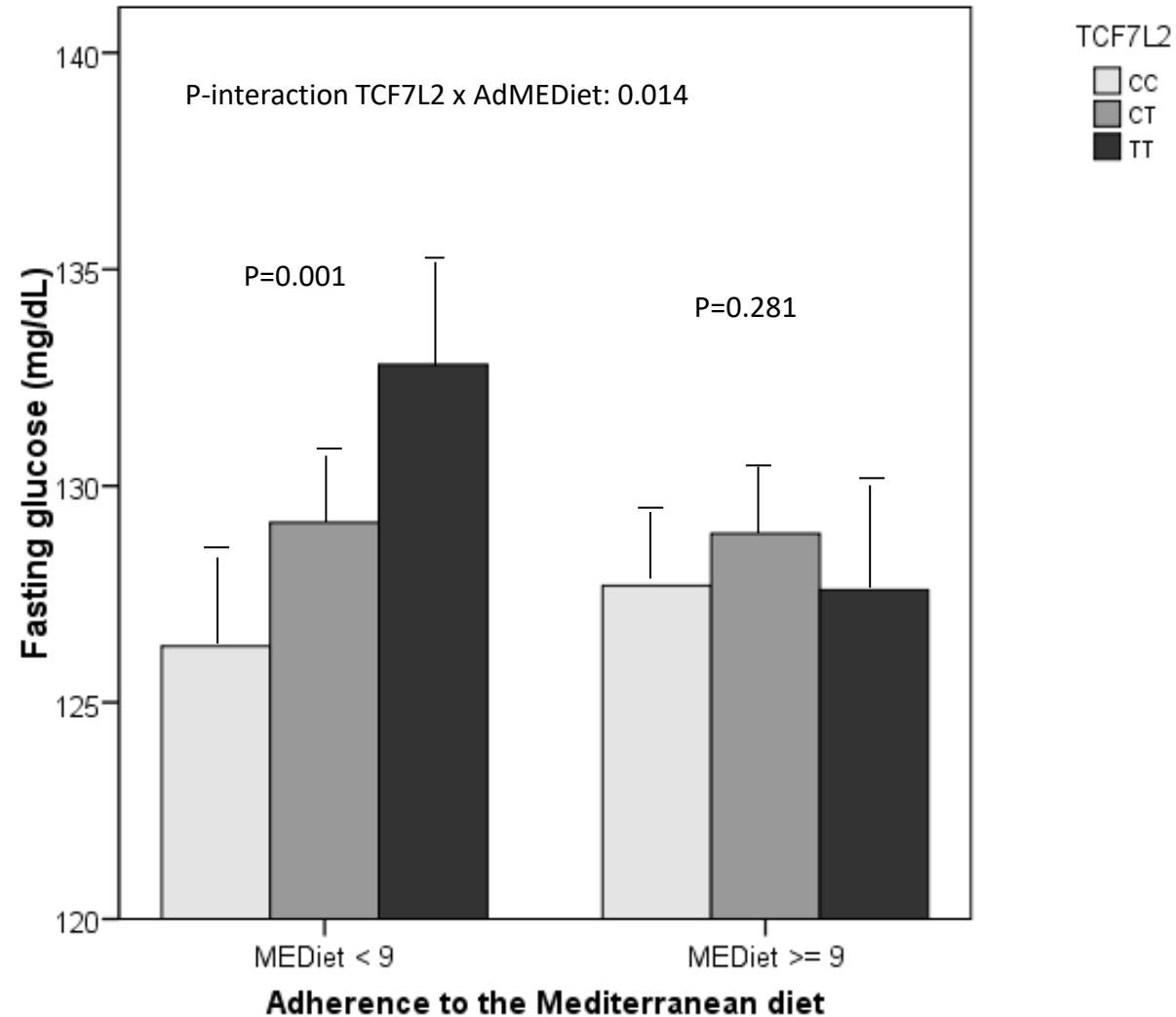
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Supplementary Table 2. Association between the TCF7L2 -rs7903146 polymorphism and fasting glucose, plasma lipid concentrations and type 2 diabetes at baseline*

Parameter	TCF7L2 genotypes						P†	P‡	
	CC		CT		TT				
	(n=2,770)		(n=3,249)		(n=999)				
	Mean	SD	Mean	SD	Mean	SD			
Age (years)	67.0	± 6.0	67.0	± 6.1	66.7	± 6.3	0.392		
BMI (kg/m ²)	30.2	± 3.9	29.9	± 3.8	29.6	± 3.6	0.004	0.003	★
Waist circumference (cm)	100.7	± 10.7	100.2	± 10.4	100.1	± 9.8	0.147	0.193	
Fasting glucose§ (mg/dL)	117.5	± 39.0	124.2	± 42.7	128.1	± 43.6	1.18 x 10 ⁻¹²	0.021	★
Total cholesterol§ (mg/dL)	211.6	± 39.7	210.6	± 40.0	211.7	± 38.6	0.587	0.275	
LDL-C§ (mg/dL)	130.6	± 34.4	130.2	± 36.5	130.0	± 34.1	0.901	0.509	
HDL-C§ (mg/dL)	53.4	± 14.0	53.9	± 14.2	54.4	± 13.6	0.204	0.098	
Triglycerides§ (mg/dL)	139.0	± 86.0	137.0	± 77.0	133.9	± 69.1	0.494	0.520	
Type 2 diabetes: n (%)	1158	(41.8)	1680	(51.7)	573	(57.4)	3.1 x 10 ⁻²¹		
Type 2 diabetes risk (OR and 95% CI)	Ref.		1.50 (1.35-1.65)		1.87 (1.62-2.17)		3.3 x 10 ⁻²¹	5.4 x 10 ⁻²¹	

Interacción entre el polimorfismo TCF7L2 y adherencia a la Dieta Mediterránea sobre las concentraciones plasmáticas de glucosa



Interacción entre el polimorfismo TCF7L2 y Adherencia a la Dieta Mediterránea sobre los lípidos plasmáticos

Supplementary Table 3. Interaction between the TCF7L2- rs7903146 polymorphism and pre-randomization adherence to the Mediterranean diet in determining plasma lipid concentrations. Multivariate* adjusted means and P values.

Parameter (mg/dL) / Adherence to Mediterranean Diet	TCF7L2 genotypes		p [†]	p [‡]	
	CC+CT Mean (SE)	TT Mean (SE)	TCF7L2 Genotype	Interaction Genotype x Diet	
Total cholesterol				0.005	★
Low (<9) (n=2992)	206.2 ± 3.5	211.3 ± 3.9	0.005		
High (≥9) (n=3576)	208.7 ± 3.5	206.5 ± 3.8	0.251		
LDL-C				0.003	★
Low (<9) (n=2946)	124.1 ± 3.2	128.7 ± 3.5	0.005		
High (≥9) (n=3529)	125.9 ± 3.2	124.5 ± 3.4	0.167		
HDL-C				0.628	
Low (<9) (n=2968)	54.0 ± 1.3	54.9 ± 1.4	0.151		
High (≥9) (n=3529)	54.4 ± 1.3	55.8 ± 1.4	0.037		
Triglycerides				0.046	★
Low (<9) (n=2964)	142.5 ± 7.8	143.2 ± 8.5	0.528		
High (≥9) (n=3528)	139.2 ± 7.7	130.4 ± 8.4	0.036		

Interacción entre el polimorfismo del TCF7L2 e Intervención con Dieta Mediterránea sobre el riesgo de accidente vascular cerebral

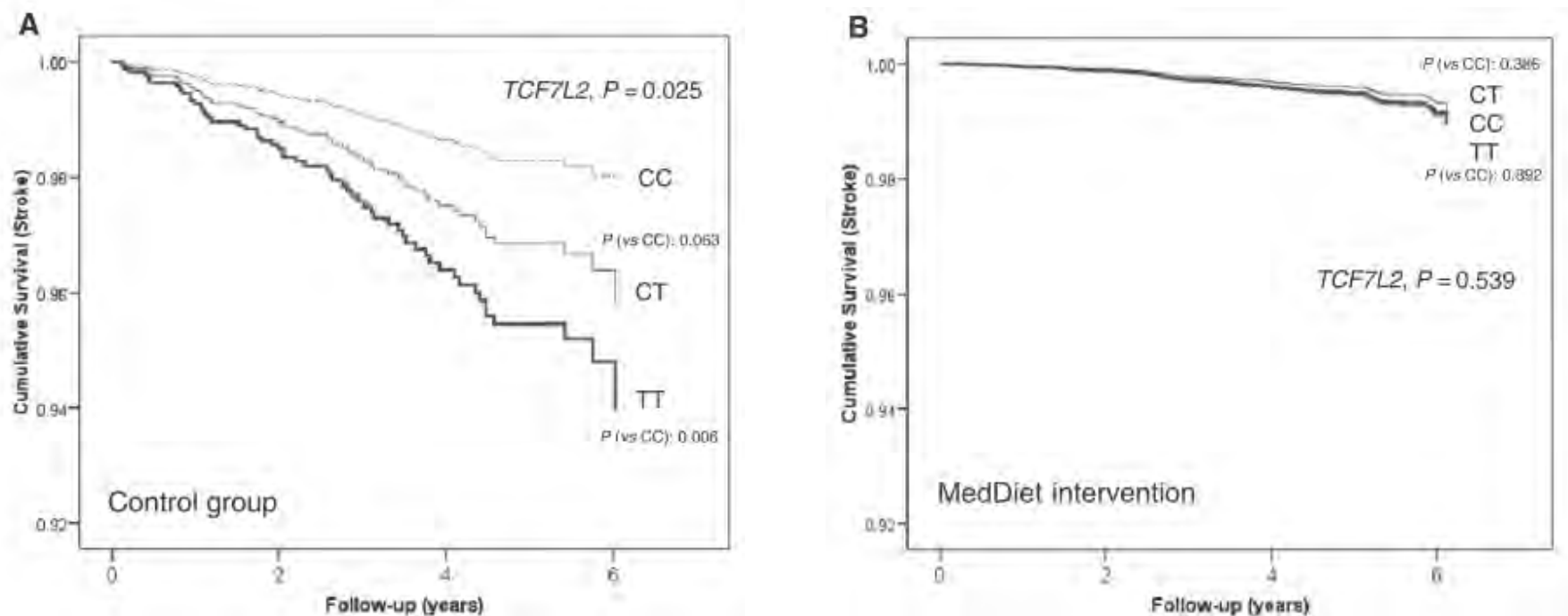


Figure 1—Cumulative stroke free-survival by TCF7L2-rs7903146 genotypes in the control group (A) (n = 2,291) and in the MedDiet intervention groups (B) (n = 4,827). Cox regression models with outcome of stroke and the TCF7L2-rs7903146 polymorphism (CC, CT and TT) adjusted by sex, age, center, type 2 diabetes, BMI, intervention group, alcohol, smoking, total energy intake, and adherence to the MedDiet at baseline. The P values for the TCF7L2 polymorphism and for the corresponding genotypes (CT vs. CC or TT vs. CC) were obtained in the multivariable adjusted models.

INTERVENCIÓN NUTRICIONAL

NUTRICIÓN PERSONALIZADA

NUTRICIÓN POBLACIONAL

NUTRICIÓN PLANETARIA

ESTRATEGIA: CANTIDAD versus CALIDAD

CANTIDAD DE VIDA
RELACIONADA CON LA
SALUD: LONGEVIDADY



CUALIDAD DE VIDA
RELACIONADA CON LA
SALUD



EFFECTOS SOBRE LA LONGEVIDAD





Estudios de Intervención sobre los efectos de la Dieta Mediterránea sobre las Enfermedades Cardiovasculares



Efectos de la Dieta Mediterránea en la Prevención Primaria de la Enfermedad Cardiovascular (Estudio PREDIMED)

DISEÑO DEL ESTUDIO PREDIMED

Sin ECV al inicio

- ❑ Homes: 55-80 a.
- ❑ Dones: 60-80 a.
- ❑ Alto riesgo CV sin ECV
 - Diabéticos tipo 2
 - 3+ factores de risc

1. Tabaquismo
2. Hipertensión
3. ↑ LDL
4. ↓ HDL
5. Sobrepeso/obesidad
6. Historia Familiar

Aleatorio



**Mediet +
Virgin Olive Oil**



**Mediet +
Nuts**



**Control
Low-fat**

Metabolismo de la Glucosa y la Diabetes

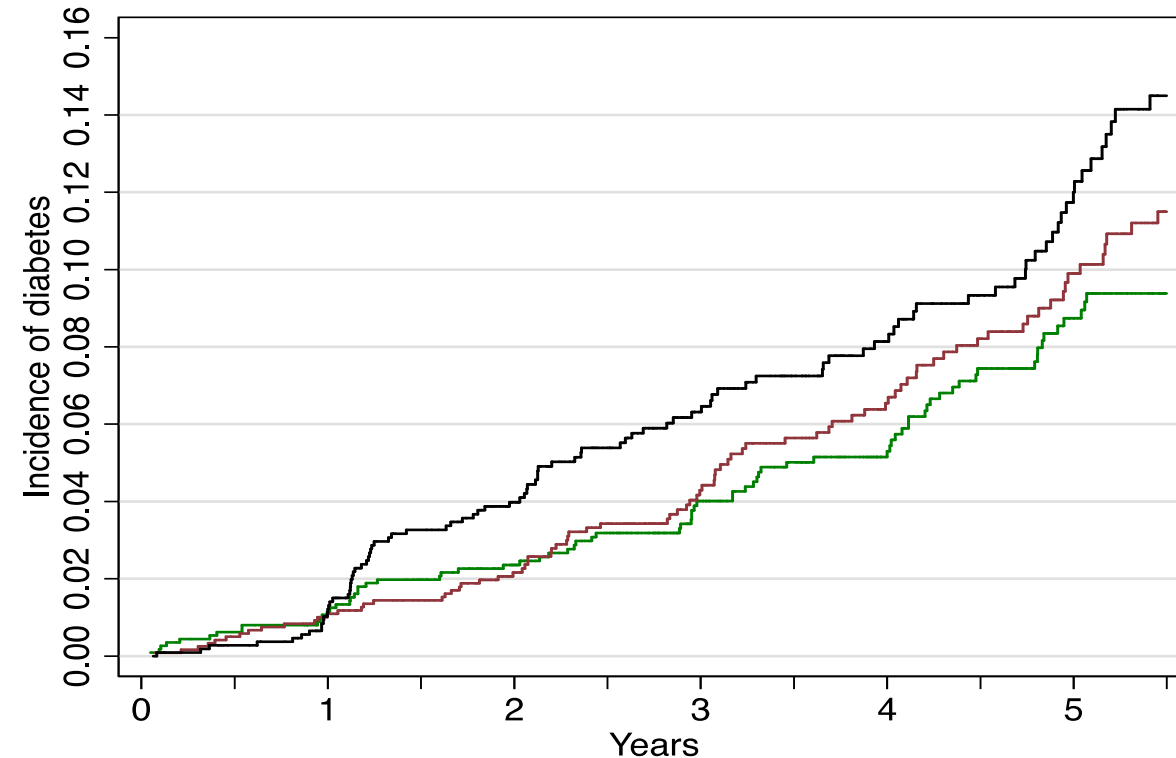
PREVENCIÓN DE DIABETES con DIETA MEDITERRÁNEA: ENSAYO ALEATORIZADO Y CONTROLADO

Incidencia acumulada de diabetes según los grupos de intervención: Inicio de diabetes y exposición a la intervención con Dieta Med. vs. control.



40 % Reducción en la
incidencia

No cambios
clínicamente
significativos en la
pérdida de peso



Number at risk

Group = MeDiet+EVOO

Group = MeDiet+nuts

Group = Control

1135

1109

996

830

681

488

1201

1172

1000

774

629

427

1092

1052

901

678

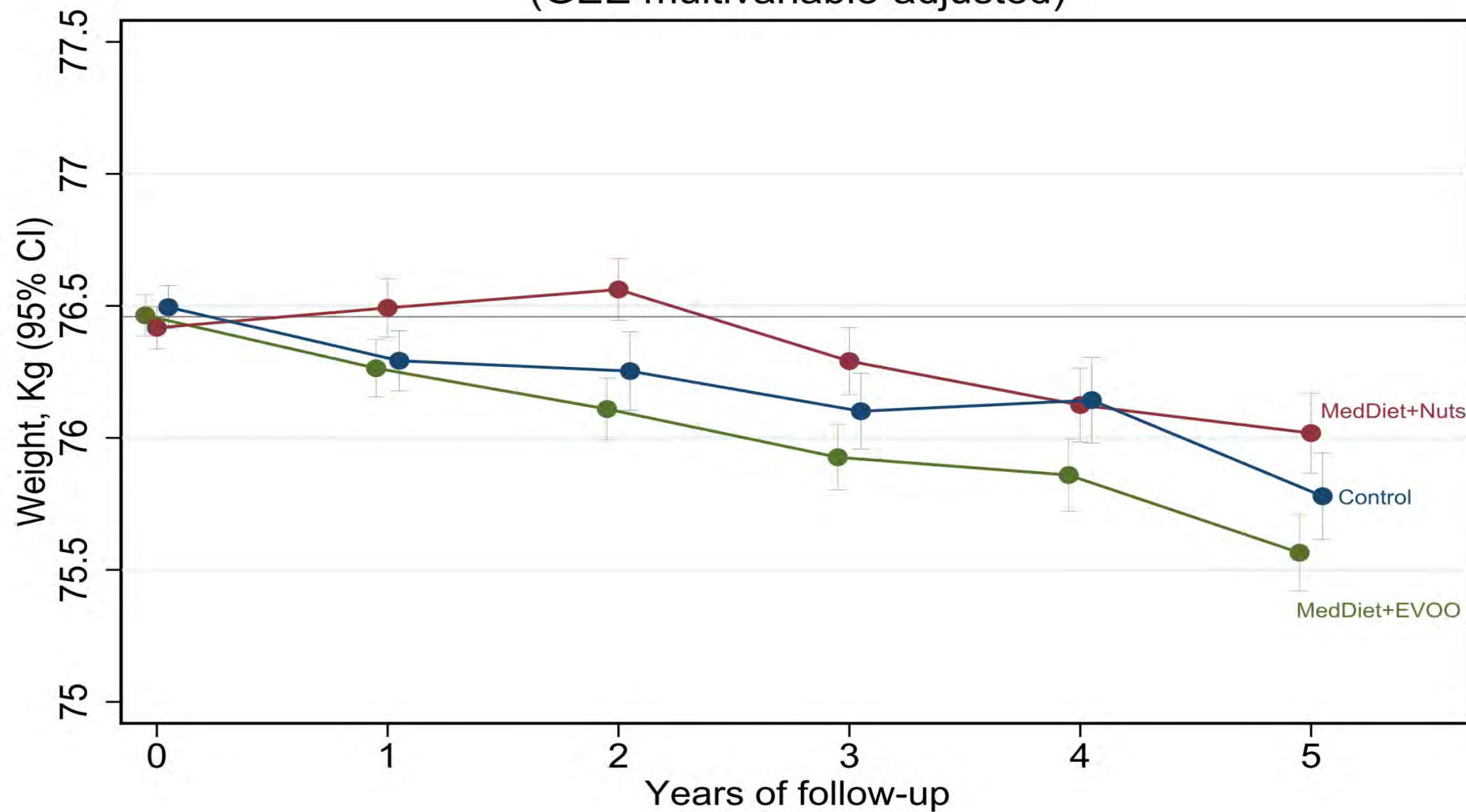
522

367

Efectos sobre el Peso y la Cintura

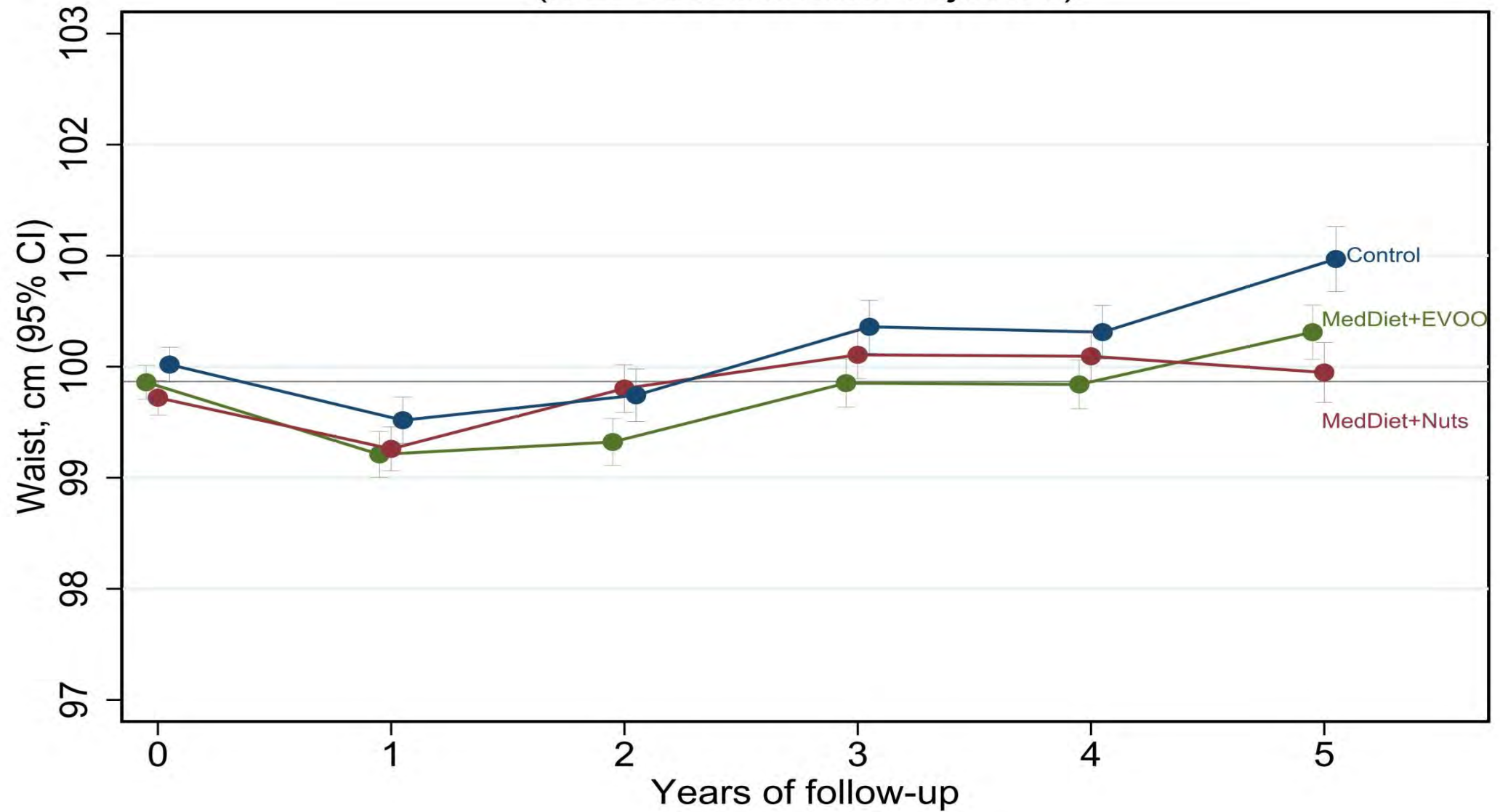
Average Weight during follow-up

(GEE multivariable-adjusted)



Average Waist during follow-up

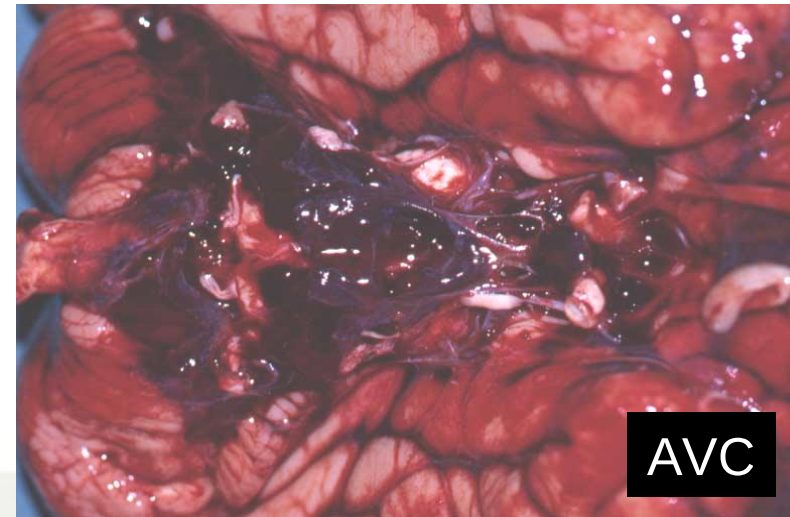
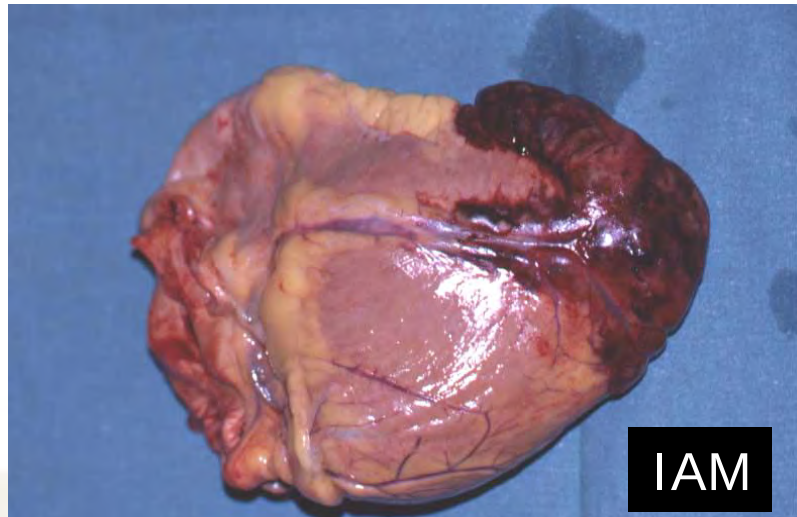
(GEE multivariable-adjusted)

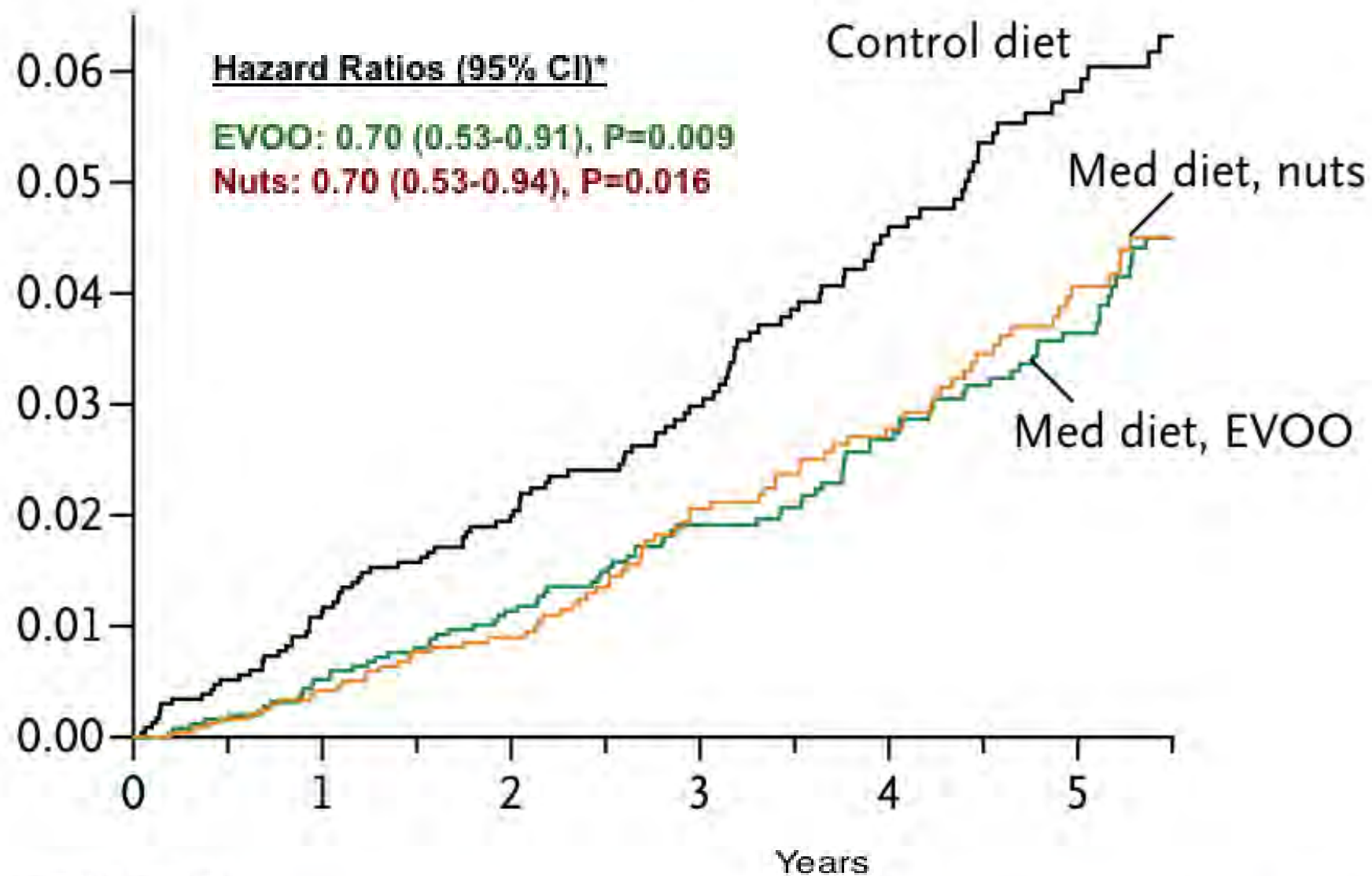




VARIABLES PRIMARIAS

Muerte Cardiovascular
Infarto Agudo de Miocardio
Accidente Vascular Cerebral

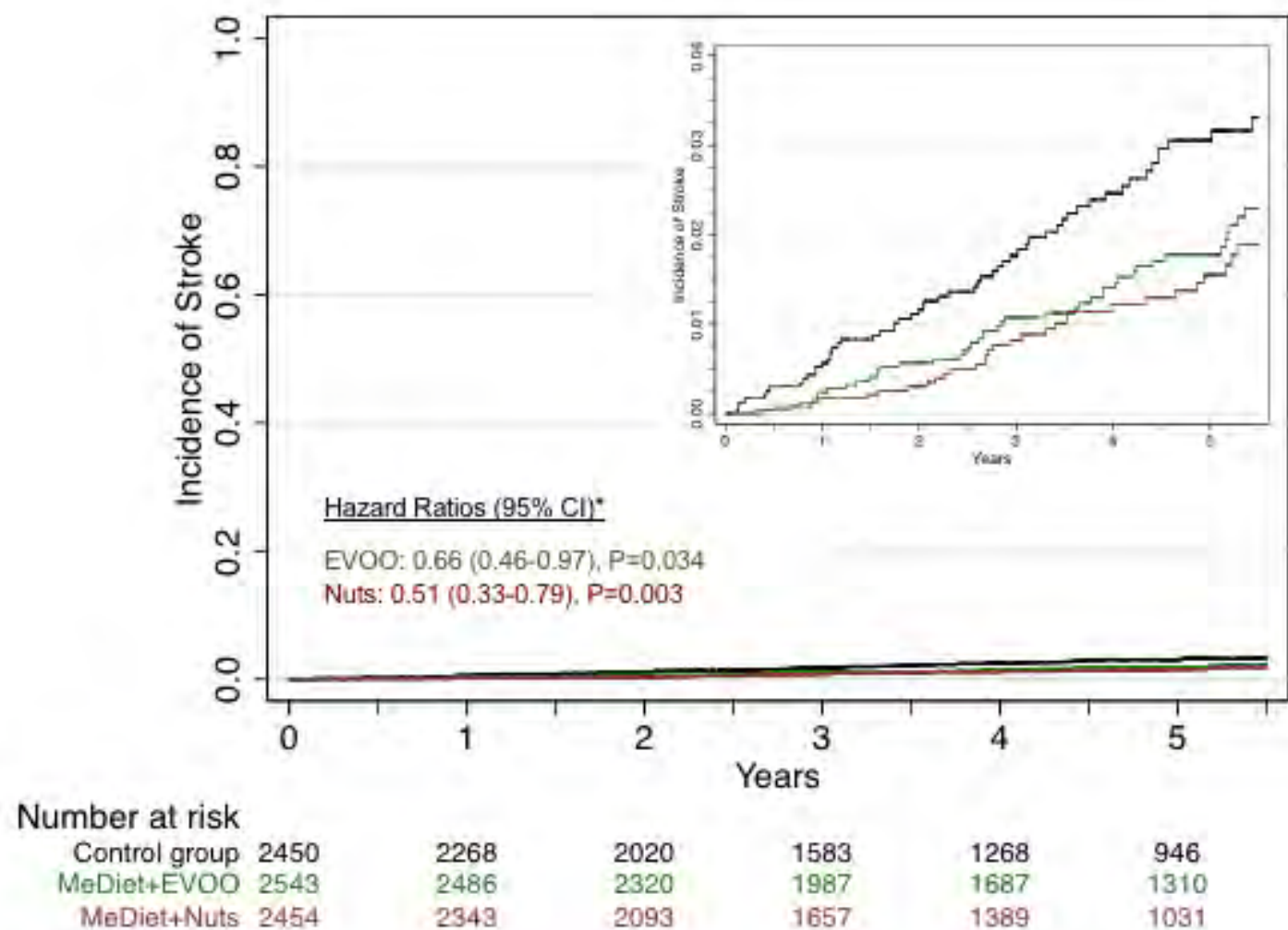




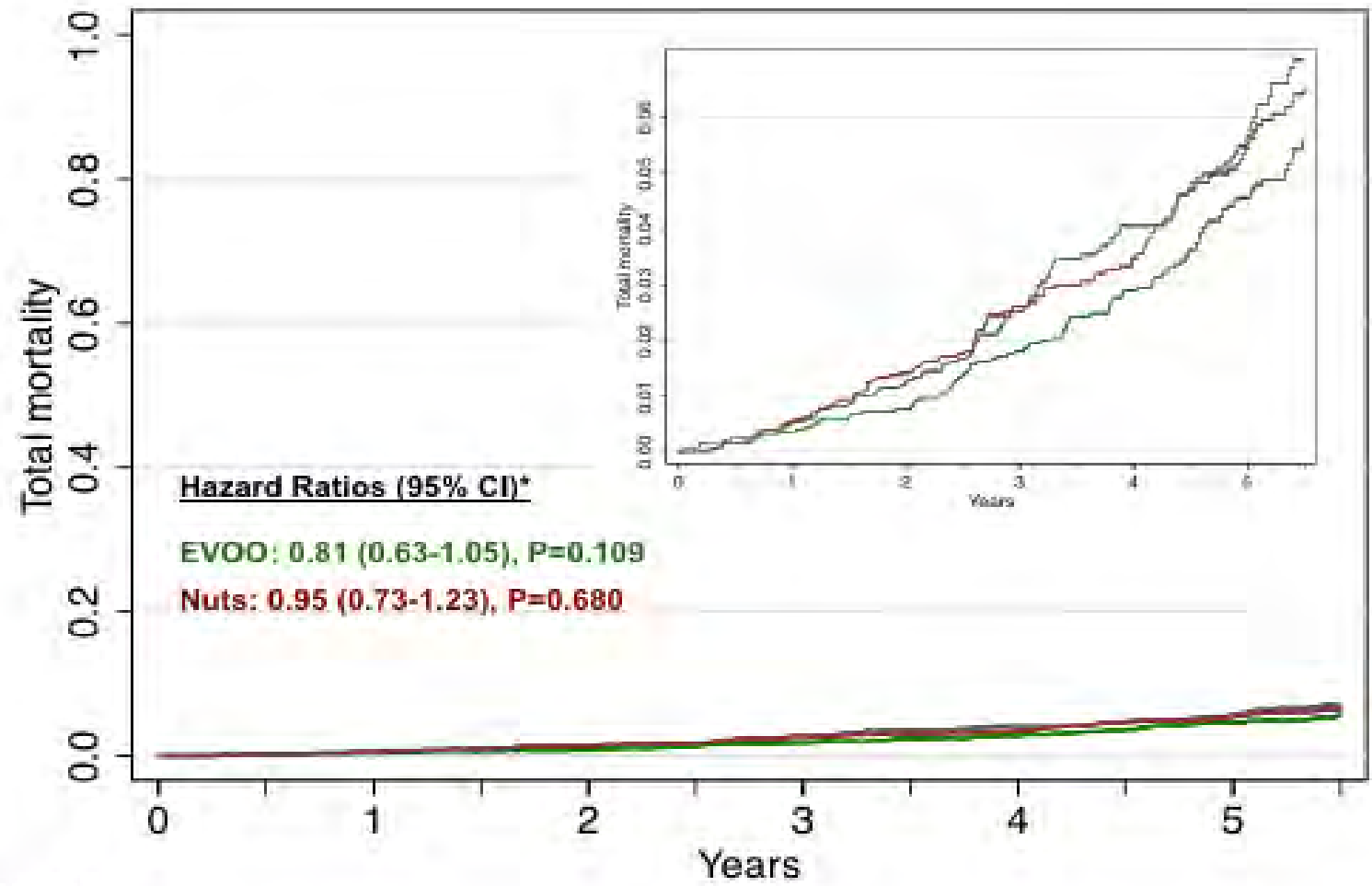
Number at risk

Control group	2450	2268	2020	1583	1268	946
MeDiet+EVOO	2543	2486	2320	1987	1687	1310
MeDiet+Nuts	2454	2343	2093	1657	1389	1031

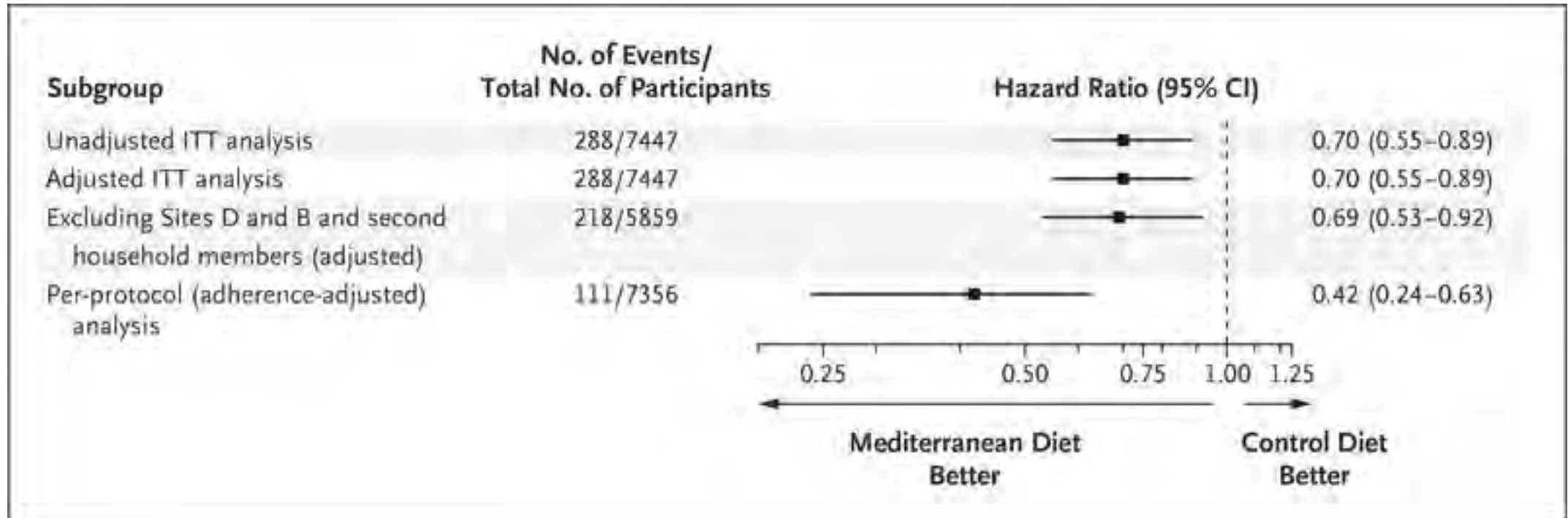
Resultados: AVC



Resultados: Mortalidad



Anàlisi de Sensibilitat de los Efectos sobre los dos Grupos Combinados de Dieta Mediterrània vs. el Grupo Control



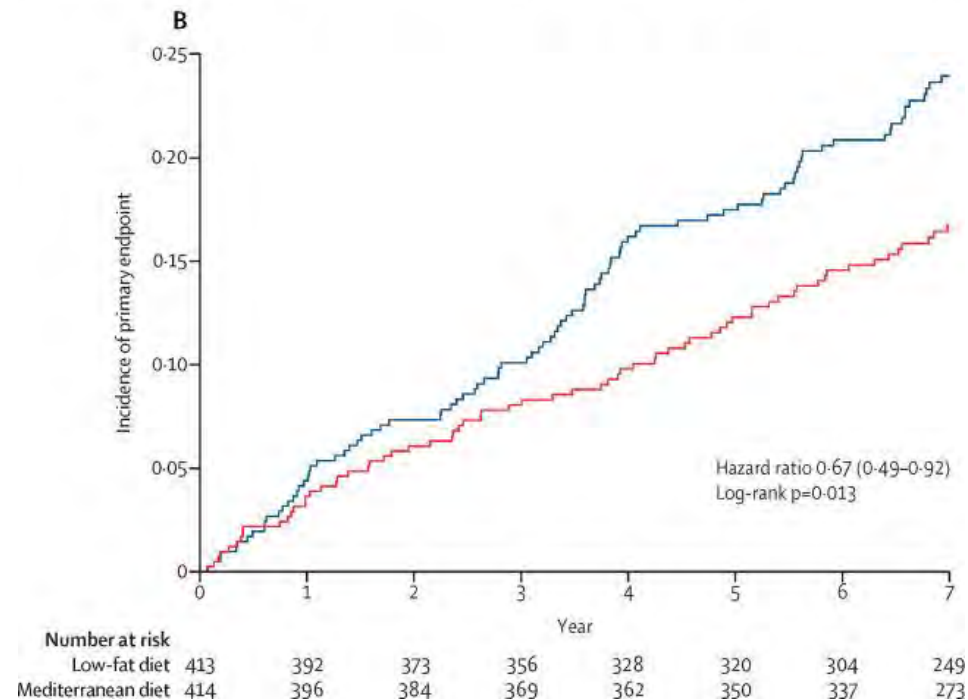
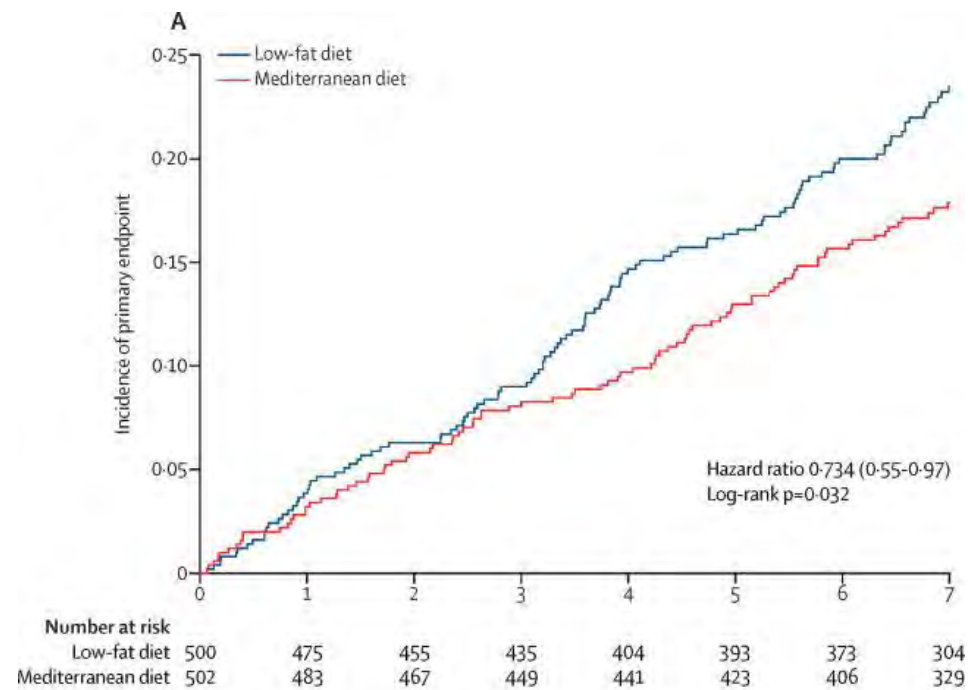


E S T U D I O
CordiPrev



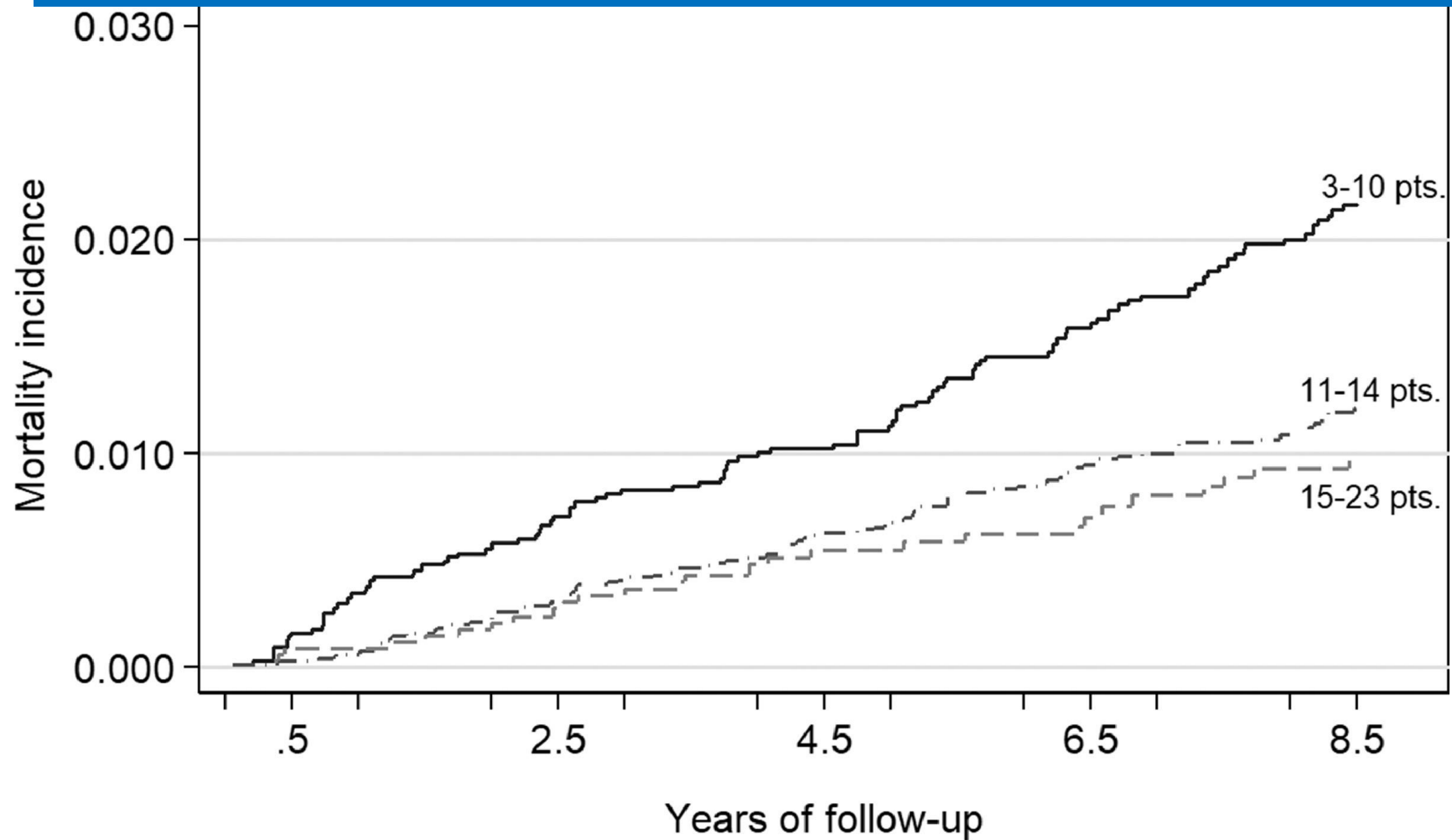
ESTUDIO CORDIOPREV PREVENCIÓN SECUNDARIA

1002
PACIENTES
CON IAM



Lancet 2022

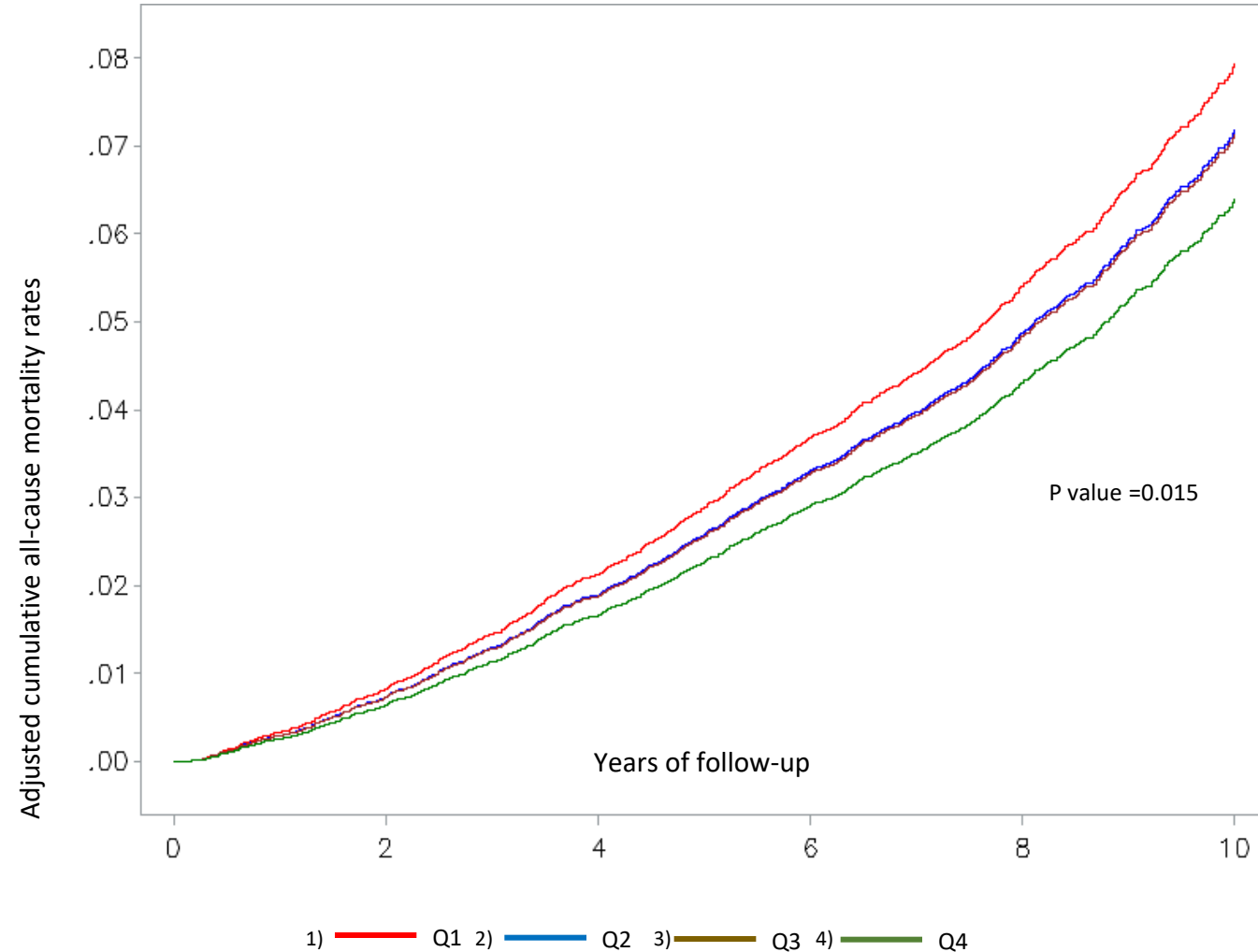
Mortalidad global según la adherencia a la Dieta Mediterránea en el estudio SUN



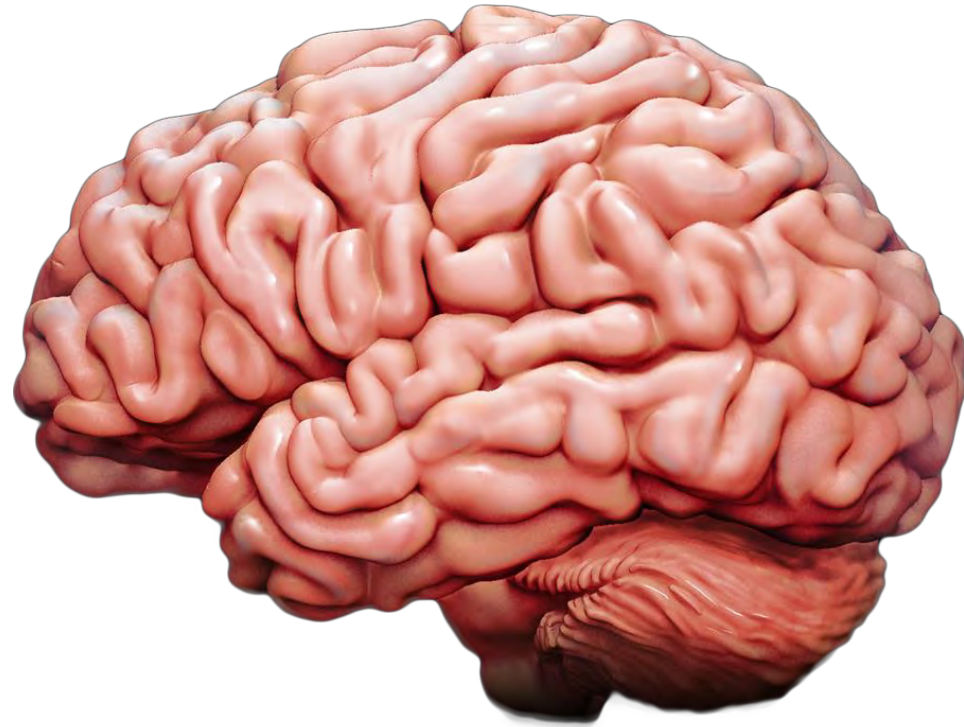
Number at risk

Q1: 3-10 pts.	12,272	11,942	11,162	10,139
Q2+Q3: 11-14 pts.	20,164	19,581	18,159	16,271
Q4: 15-23 pts.	6,599	6,340	5,731	5,011

Dieta Mediterránea y Mortalidad en la cohorte del Estudio Moli-sani (Italia)

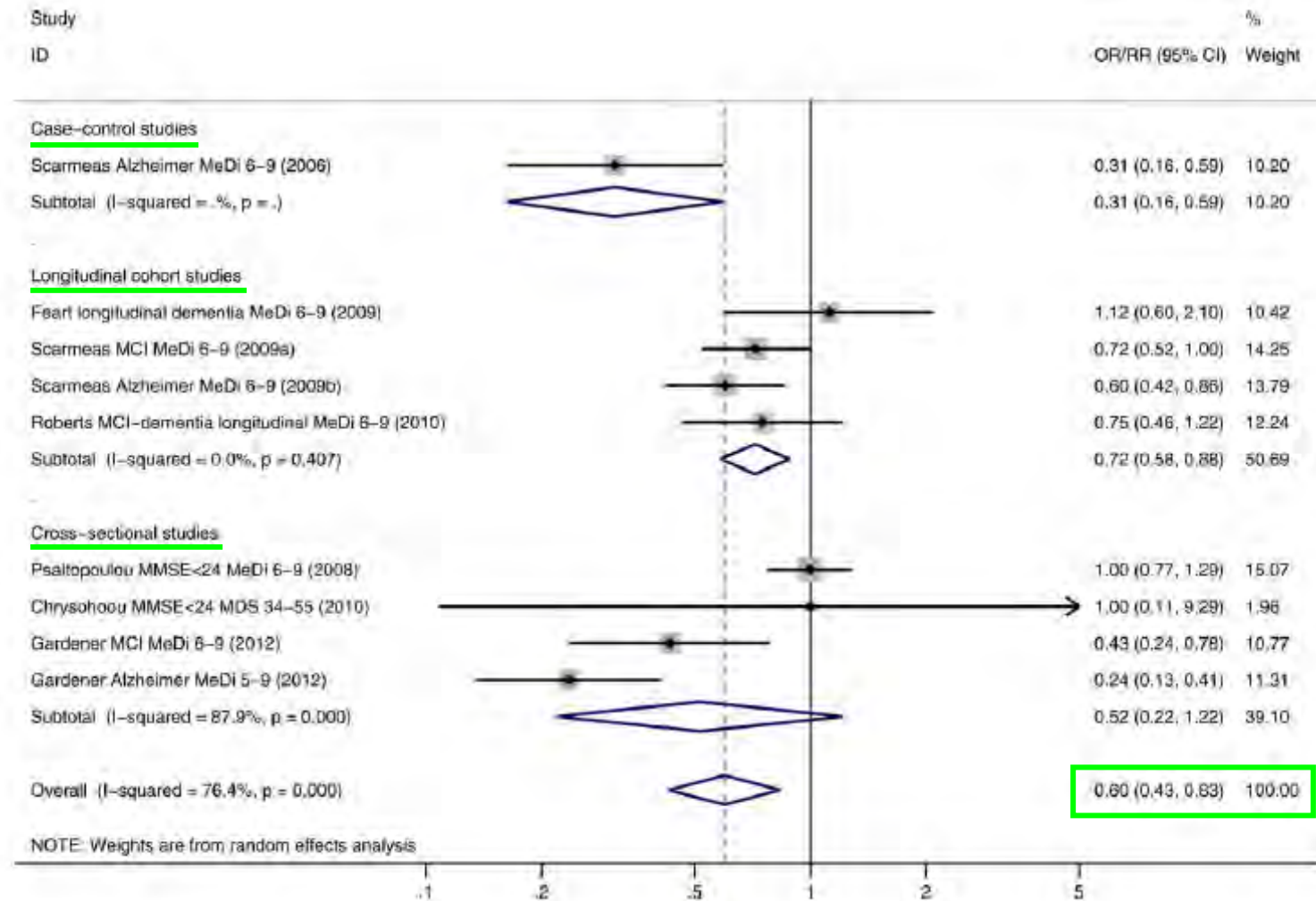


EFFECTOS SOBRE LA CALIDAD DE VIDA



**EFFECTOS DE LA DIETA
MEDITERRÁNEA
SOBRE LA FUNCIÓN
COGNITIVA Y LA
ENFERMEDAD DE
ALZHEIMER**

ADHERENCIA A LA DIETA MEDITERRÁNEA Y RIESGO DE DETERIORO COGNITIVO Y/O ENF. DE ALZHEIMER



Polyphenol-Rich Foods in the Mediterranean Diet are Associated with Better Cognitive Function in Elderly Subjects at High Cardiovascular Risk

Cinta Valls-Pedret^{a,b}, Rosa Maria Lamuela-Raventós^{b,c,d}, Alexander Medina-Remón^{b,c,d}, Melibea Quintana^a, Dolores Corella^{b,e}, Xavier Pintó^{d,f}, Miguel Ángel Martínez-González^{d,g}, Ramon Estruch^{b,h} and Emilio Ros^{a,b,*}

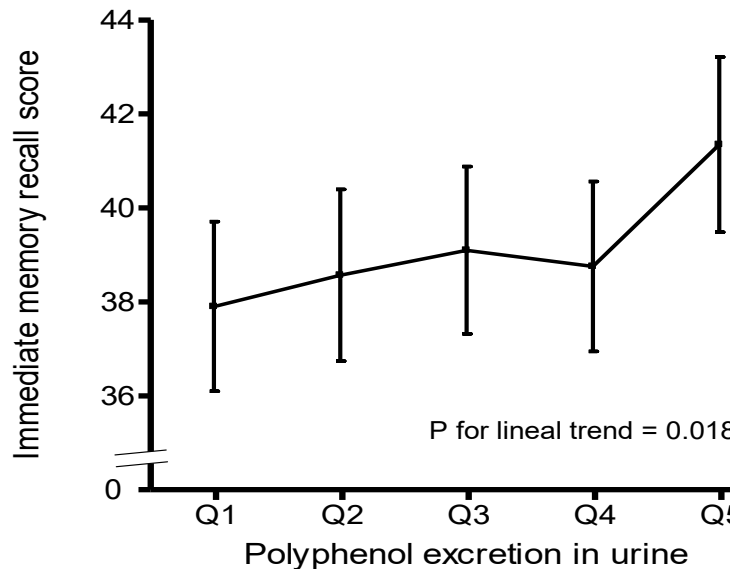
Mejor puntuación en tests neuropsicológicos con aumento del consumo de:

- Vino
- Aceite de oliva total y virgen extra
- Café
- Nueces

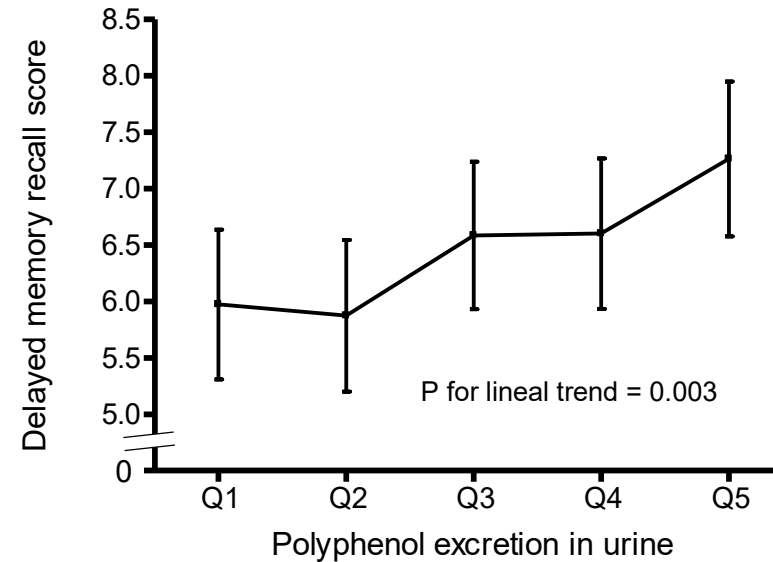
ESTUDIO PREDIMED: DIETA MEDITERRÁNEA Y COGNICIÓN

Puntuaciones de los tests de memoria de RAVLT según
quintiles de excreción urinaria de polifenoles

Recuerdo inmediato



Recuerdo diferido



Valls-Pedret C, et al. J Alzheimers Dis 2012;29:773–82.

PREDIMED – Neurodegenerative Disorders

Research

Original Investigation

Mediterranean Diet and Age-Related Cognitive Decline A Randomized Clinical Trial

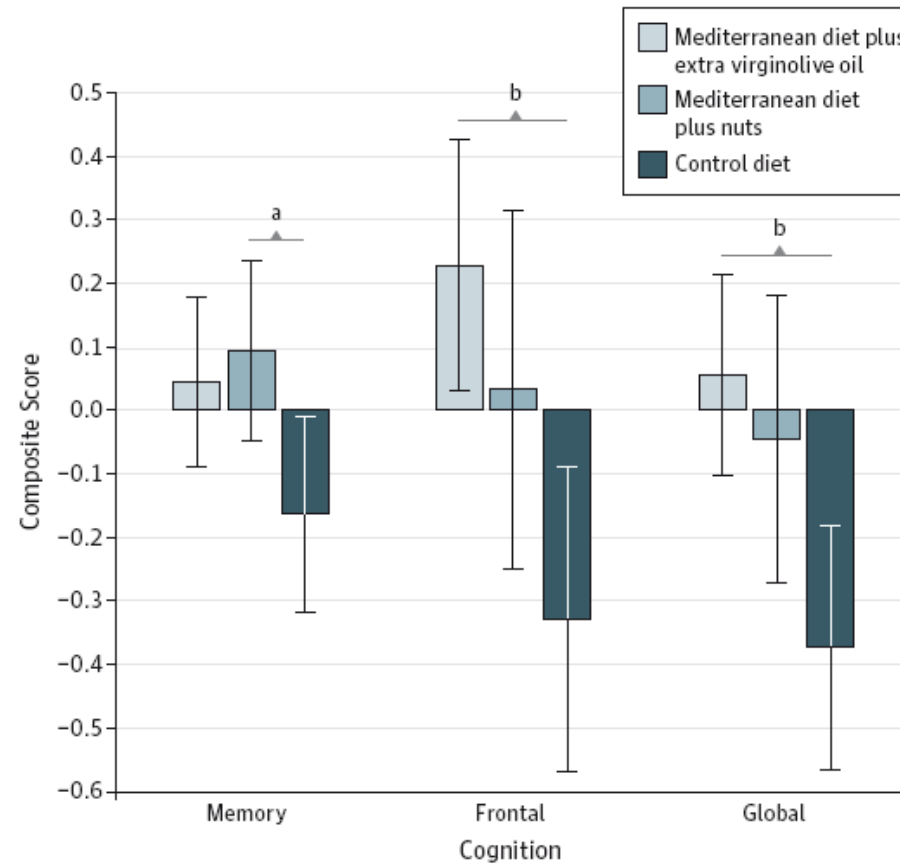
Cinta Valls-Pedret, MSc; Aleix Sala-Vila, DPharm, PhD; Mercè Serra-Mir, RD; Dolores Corella, DPharm, PhD; Rafael de la Torre, DPharm, PhD; Miguel Ángel Martínez-González, MD, PhD; Elena H. Martínez-Lapiscina, MD, PhD; Montserrat Fitó, MD, PhD; Ana Pérez-Heras, RD; Jordi Salas-Salvadó, MD, PhD; Ramon Estruch, MD, PhD; Emilio Ros, MD, PhD

JAMA Intern Med. 2015;175(7):1094-1103.

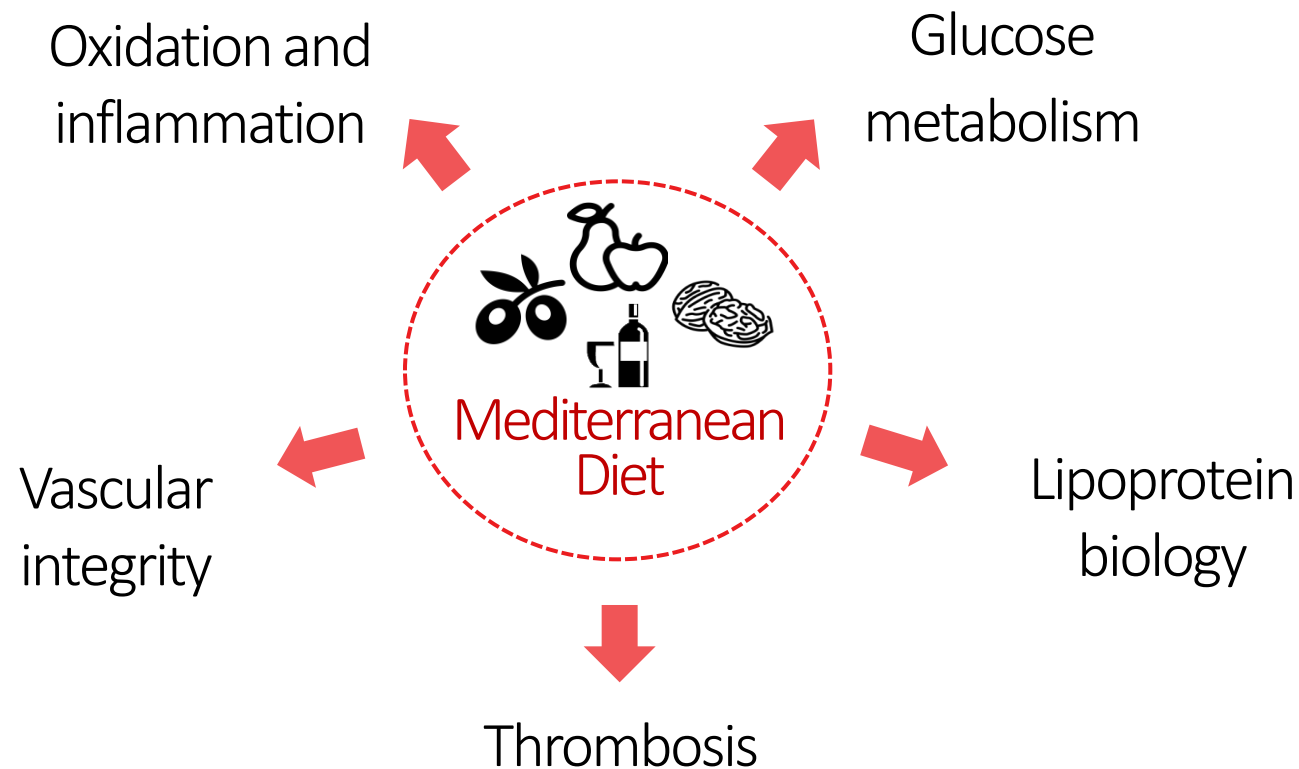
PREDIMED sub study: Diet & Cognition

Longitudinal evaluation of 447 participants

Changes of mean z scores (final minus baseline)



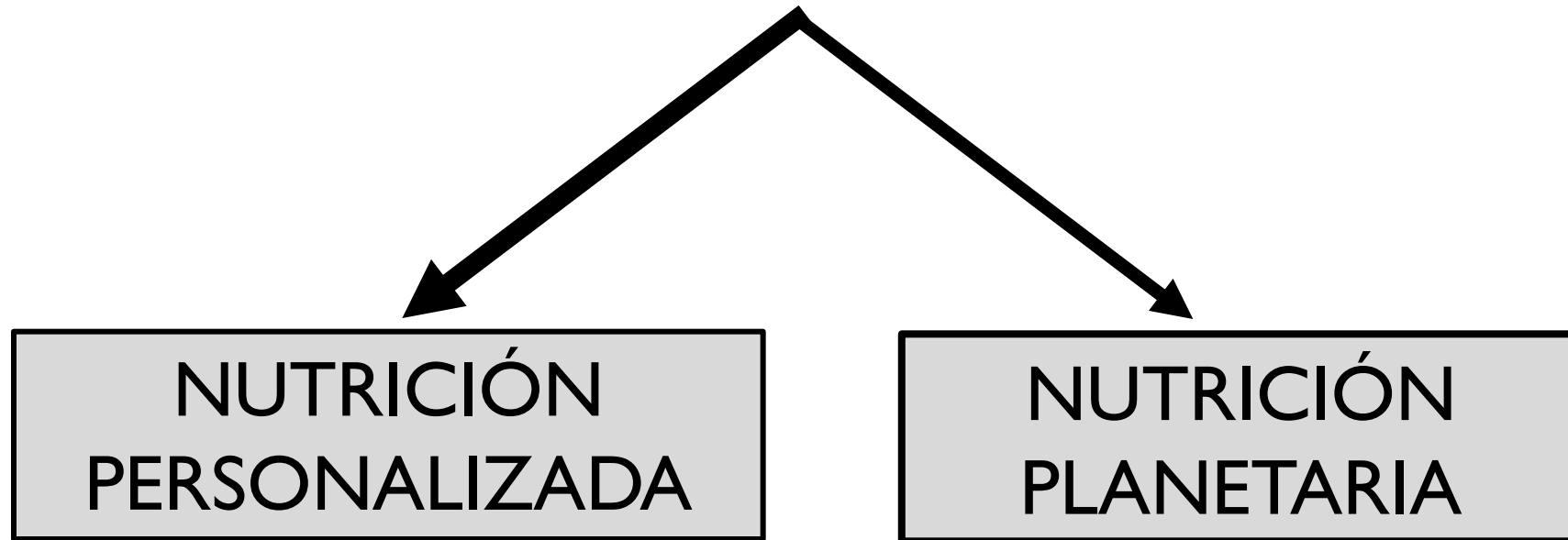
Mechanisms of the Mediterranean Diet On CV Health : Overview



Mechanisms of Aging

INTERVENCIONES NUTRICIONALES

NUTRICIÓN POBLACIONAL



GLOBAL SYNDEMIC OF OBESITY, MALNUTRITION AND CLIMATE CHANGE



"The Global Syndemic represents the paramount health challenge for humans, the environment, and our planet in the 21st century."

The Global Syndemic of Obesity, Undernutrition and Climate Change

THE LANCET

The best science for better lives

DIET QUALITY: Not all calories are created equal

ENVIRONMENTAL IMPACT: Not all foods have the same impact

LA SOBREPSTRUCCIÓN DE CARNE ROJA IMPACTA NEGATIVAMENTE EN EL PLANETA

FEED THE PLANET

Founded by **WORLD**CHEFS
Powered by **Electrolux** and **AIESEC**

RELATIVE GREENHOUSE-GAS EMISSIONS ASSOCIATED WITH SOME COMMON PROTEIN SOURCES

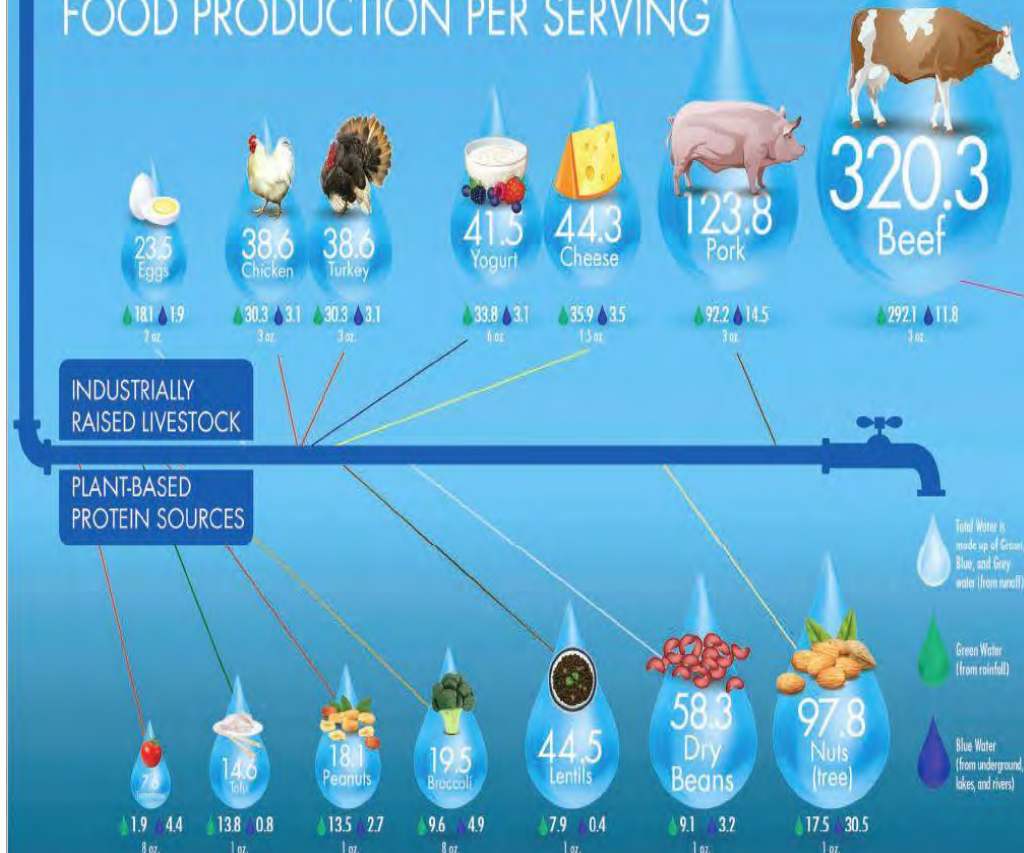


Illustration of the greenhouse-gas emissions associated with several common protein sources and is a good indicator of environmental impact including energy and chemical use, soil management, and mechanical irrigation. Both public health and the environment will improve if restaurants decrease the amount of red meat on menus and replace it with alternative protein sources.

*Calorie Reference: USDA National Nutrient Database for Standard Reference, Release 25: Energy (kcal) Content of Selected Foods per Common Measure, <https://www.ars.usda.gov/SP2UserFiles/PeriodicTable/SR25nutr16a.pdf>
*Protein Reference: USDA National Nutrient Database for Standard Reference, Release 25: Protein (g) Content of Selected Foods per Common Measure, <https://www.ars.usda.gov/SP2UserFiles/PeriodicTable/SR25nutr16a.pdf>

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GALLONS OF WATER USED IN FOOD PRODUCTION PER SERVING



Source Data: Million in Water Footprint Network Water Statistics Table (Animals, Crops) for the U.S.
Sources: T. Hane, 2015, Changing Tastes: 2015 and M.M. Mekonnen and A.Y. Hoekstra, "The Green, Blue and Grey Water Footprint of Crops and Derived Crop Products," and "The Green, Blue and Grey Water Footprint of Plant Animals and Animal Products," Value of Water Research Report Series No. 47 and 48, UNESCO-IHE, Delft, the Netherlands, 2010.

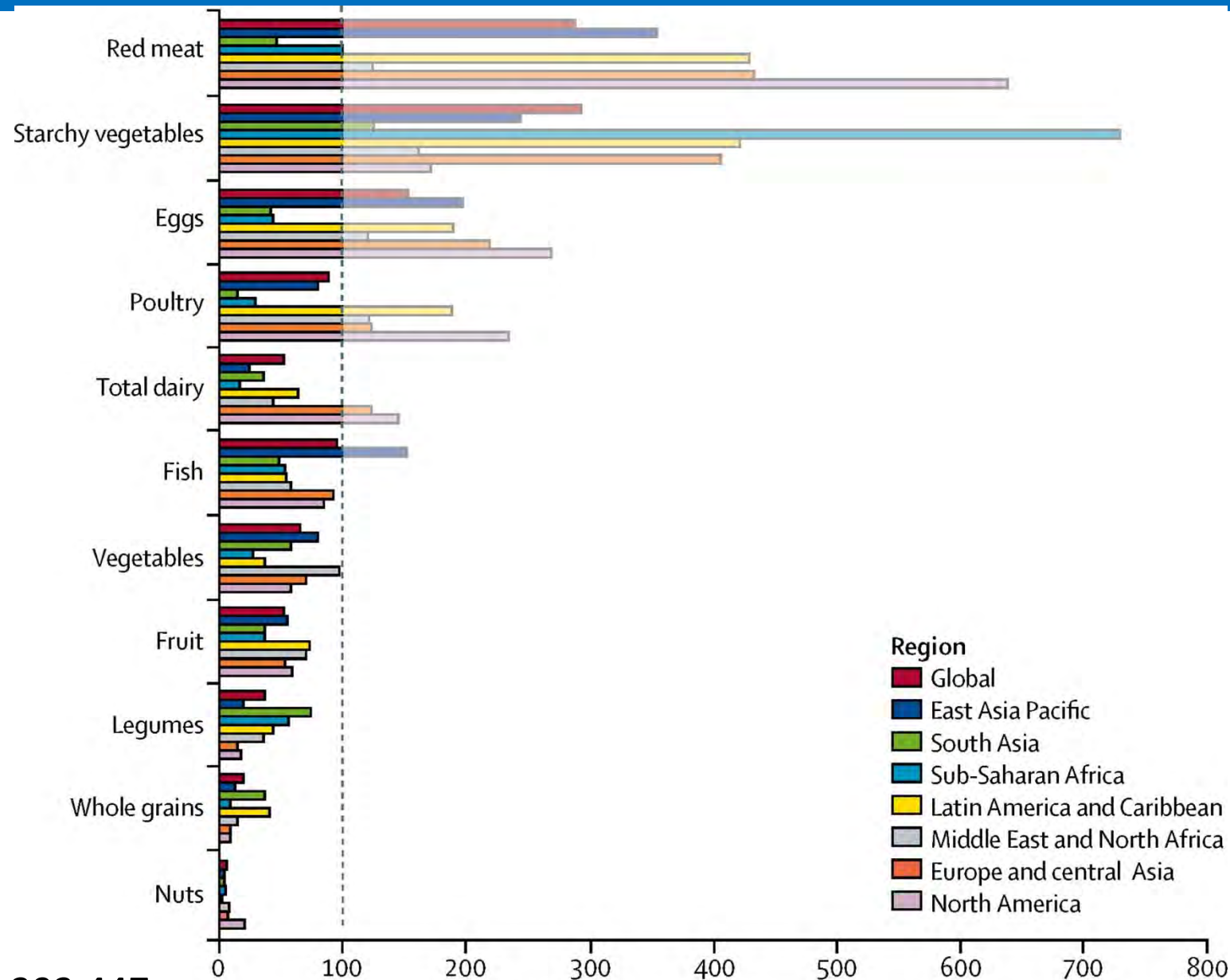
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DIETAS BASADAS EN LAS PLANTAS



PARA MINIMIZAR LOS EFECTOS DE LA ALIMENTACIÓN SOBRE EL PLANETA SE RECOMIENDA REDUCIR EL CONSUMO DE CARNE Y PESCADO EN MÁS DEL 50% Y AUMENTAR EL CONSUMO DE FRUTA, VERDURAS, FRUTOS SECOS Y LEGUMBRES HACIA EL 100%.

INGESTA DIETÉTICA 2016 Y VALORES DE REFERENCIA



ORIGINAL RESEARCH ARTICLE

Low-Calorie Vegetarian Versus Mediterranean Diets for Reducing Body Weight and Improving Cardiovascular Risk Profile CARDIVEG Study (Cardiovascular Prevention With Vegetarian Diet)

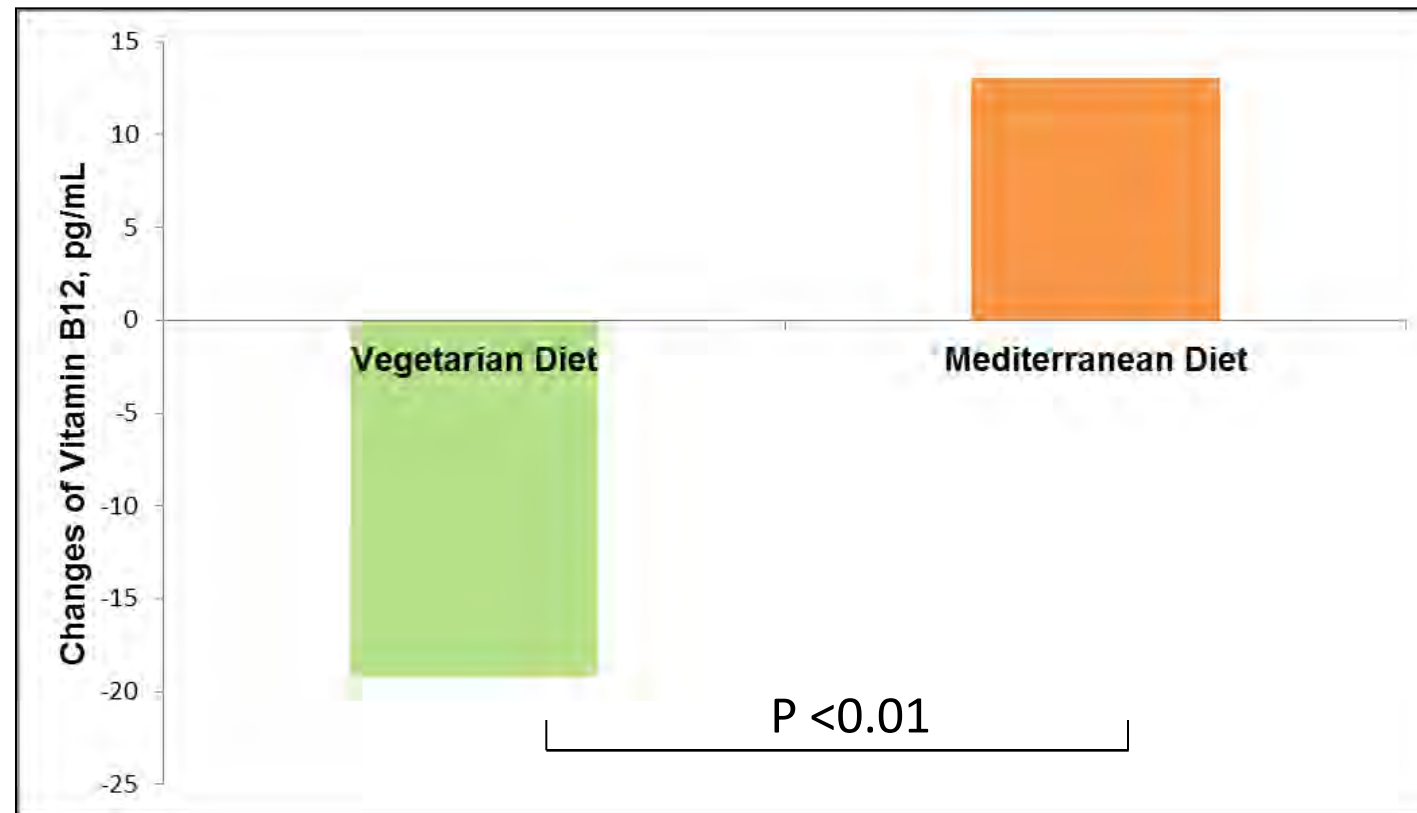
Randomized cross-over intervention trial: 118 participants
Changes in Biochemical Parameters

	Vegetarian Diet: Before (n=104)	Vegetarian Diet: After (n=104)	Mediterranean Diet: Before (n=103)	Mediterranean Diet: After (n=103)	$P(\Delta_{VD} \text{ Versus } \Delta_{MD})^\dagger$
Hemoglobin, g/dL	13.65 (13.42–13.90)	13.57 (13.31–13.83)	13.68 (13.46–13.90)	13.71 (13.49–13.92)	0.19
Hematocrit, %	41.14 (40.49–41.76)	40.94 (40.25–41.60)	41.06 (40.41–41.72)	41.26 (40.61–41.97)	0.04
Folate, ng/mL	6.67 (6.04–7.36)	7.08 (6.44–7.78)	6.81 (6.17–7.51)	7.26 (6.60–7.99)	0.86
Vitamin B ₁₂ , pg/mL	380.70 (357.17–404.24)	361.41 (340.36–383.37)*	376.91 (356.02–399.02)	389.94 (367.60–413.64)	<0.01
TC, mg/dL	207.89 (200.74–215.29)	202.55 (195.98–209.56)*	205.41 (197.95–212.94)	205.30 (198.34–212.72)	0.15
HDL-C, mg/dL	53.36 (51.26–55.48)	52.56 (50.30–54.93)	53.09 (50.65–55.70)	53.41 (51.21–55.70)	0.62
LDL-C, mg/dL	128.25 (114.89–134.83)	121.27 (114.89–127.87)*	123.72 (116.86–130.84)	125.84 (119.22–132.69)	0.01
Triglycerides, mg/dL	108.74 (99.29–119.10)	114.66 (104.27–126.09)	114.66 (104.38–125.96)	107.88 (98.59–118.16)*	0.01

ORIGINAL RESEARCH ARTICLE

Low-Calorie Vegetarian Versus Mediterranean Diets for Reducing Body Weight and Improving Cardiovascular Risk Profile CARDIVEG Study (Cardiovascular Prevention With Vegetarian Diet)

CAMBIOS EN VITAMINA B12, pg/mL



CONCLUSIÓN

- La **nutrición personalizada** adaptada a las características y comportamientos individuales resulta prometedora, pero todavía son necesarios más estudios antes de poder implementarse de forma general.
- La **Dieta Mediterránea** es la mejor estrategia de **nutrición poblacional** para prevenir la enfermedad cardiovascular, diabetes, enfermedades neurodegenerativas y cáncer.
- Para preservar la **salud del planeta**, es preciso tener en cuenta tanto la calidad de la nutrición poblacional como el impacto medio-ambiental de los alimentos cultivados o criados.
- La mejor nutrición personal suele ser la mejor nutrición poblacional y también la mejor nutrición para el planeta.

CONCLUSIÓN



COMER SANO ES BUENO PARA TI, PERO TAMBIÉN POR EL PLANETA ;



HACIA A UNA DIETA MEDITERRÁNEA MÁS SALUDABLE

- **SUSTITUIR EL ACEITE DE OLIVA COMÚN POR ACEITE DE OLIVA VIRGEN EXTRA.**



- **AUMENTAR EL CONSUMO DE FRUTA, HORTALIZAS, FRUTOS SECOS Y LEGUMBRES.**
- **SUSTITUIR LOS CEREALES REFINADOS POR CEREALES INTEGRALES: AUMENTAR EL CONSUMO DE FIBRA DIETÉTICA.**



HACIA A UNA DIETA MEDITERRÁNEA MÁS SALUDABLE

- REDUCIR LA SAL (SODIO).



- CONSUMA REGULARMENTE PRODUCTOS LÁCTEOS, PRINCIPALMENTE YOGURT Y QUESO FRESCO.
- MANTENER UN CONSUMO MODERADO DE VINO SIEMPRE CON LAS COMIDAS.

HACIA A UNA DIETA MEDITERRÁNEA MÁS SALUDABLE

- REDUCIR LA CARNE ROJA Y PRODUCTOS DERIVADOS DE LA CARNE.



- NO CONSUMIR BEBIDAS AZUCARADAS, NI TAMPOCO BOLLERÍA, DULCES, NI PASTELES INDUSTRIALES.



LOS OLIVOS – Vicent van GOGH - MOMA – NOVA YORK

Gracias por su atención