VI Congreso Internacional de Educación Médica

Taller: Medicina de Estilo de Vida: una respuesta a la educación médica del futuro.

Como integrar la Medicina de Estilo de Vida en el currículo

Dr. Lujohn Flórez

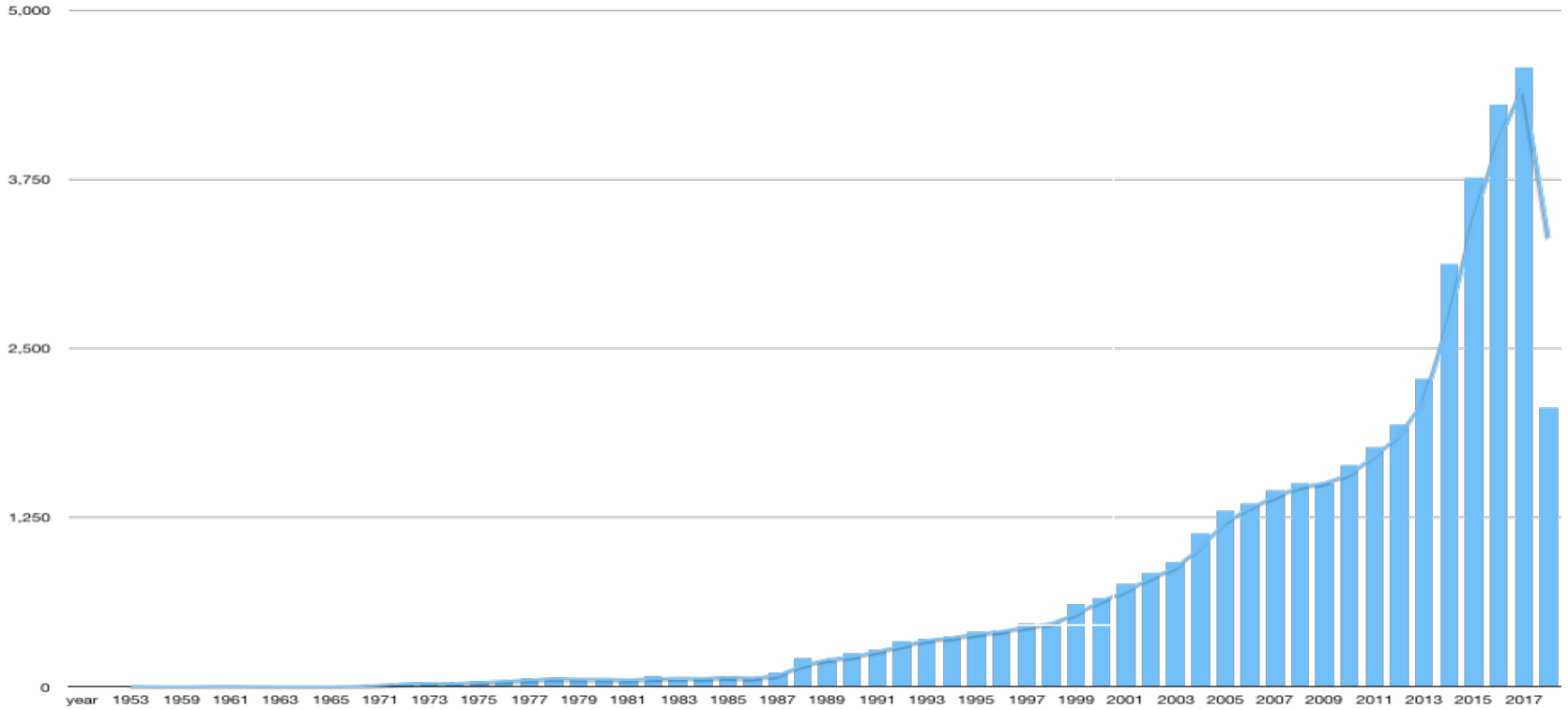
Medicina Interna - Diabetología

Nombre del facilitador

“Es la práctica basada en la evidencia, de ayudar a los individuos y sus familias a adoptar y mantener comportamientos saludables que afectan la salud y calidad de vida.”

American College of Lifestyle Medicine

Publicaciones de “Lifestyle Medicine”en Pubmed. 1952 -2018



https://www.ncbi.nlm.nih.gov/pubmed/?term=lifestyle+medicine

¿Qué dice la literatura sobre la MEV?

Table 1.2 Emerging literature on "lifestyle medicine"[a]

Keyword	Citations				Growth (%)[b]
	1999–2004	2004–2009	2009–2014	Total	
Drug	624,461	783,070	838,969	4,467,766	134
% non-English				14	
Surgery	451,497	579,030	686,508	3,496,431	152
% non-English				22	
Disease	458,415	629,504	807,286	3,149,692	176
% non-English				16	
Chronic disease	72,362	103,403	130,618	504,240	181
% non-English				20	
Lifestyle	15,738	26,307	35,467	104,592	225
% non-English				11	

[a] PubMed computerized literature search was performed on July 13, 2014. The ratio of total "chronic disease" citations divided by total "disease" citations = 16 %. The ratio of total "lifestyle" citations divided by total ("drug" + "surgery" + "lifestyle") management citations = 1 %

[b] Growth (%) = ("2009–2014" citations divided by "1999–2004" citations) × 100

Características de la Medicina del Estilo de Vida

- Énfasis en promover cambios de comportamiento que permiten que el cuerpo se cure a sí mismo
- Enfoque en óptima nutrición, manejo del estrés y prescripción de actividad física, basadas en la evidencia
- Se tratan las causas de las enfermedades relacionadas con estilo de vida
- Los pacientes son socios copartícipes de su cuidado

Características de la Medicina del Estilo de Vida

- El médico / proveedor de salud educa, guía y apoya al paciente para hacer cambios en el comportamiento
- El medicamento se utiliza como terapéutica adjunta a los cambios en el estilo de vida
- El ambiente en el hogar y la comunidad del paciente se evalúan como factores contribuyentes .

Características del Modelo Asistencialista

- Énfasis en hacer el diagnóstico y dar tratamiento farmacológico o quirúrgico .
- El paciente es un receptor pasivo del cuidado .
- Se enfoca a los signos y síntomas de la enfermedad y no a las causas de estilo de vida subyacentes .
- No se espera que el paciente haga cambios de comportamiento significativos .

Características del Modelo Asistencialista

- El médico/proveedor de salud dirige el cuidado ó modelo médico .
- Los medicamentos son la intervención terapéutica primaria
- El ambiente en el hogar y en la comunidad del paciente no se consideran de manera típica.

AACE/ACE Consensus Statement

CONSENSUS STATEMENT BY THE AMERICAN ASSOCIATION OF CLINICAL ENDOCRINOLOGISTS AND AMERICAN COLLEGE OF ENDOCRINOLOGY ON THE COMPREHENSIVE TYPE 2 DIABETES MANAGEMENT ALGORITHM – *2018 EXECUTIVE SUMMARY*

Principles

The founding principles of the Comprehensive Type 2 Diabetes Management Algorithm are as follows (see Comprehensive Type 2 Diabetes Management Algorithm—Principles):

1. Lifestyle optimization is essential for all patients with diabetes. Lifestyle optimization is multifaceted, ongoing, and should engage the entire diabetes team.

NUTRITION

EXERCISE

TOBACCO
& ALCOHOL

STRESS
MANAGEMENT

SLEEP

HEALTHY
RELATIONSHIPS

Original Investigation

The State of US Health, 1990-2010
Burden of Diseases, Injuries, and Risk Factors

US Burden of Disease Collaborators

IMPORTANCE Understanding the major health problems in the United States and how they are changing over time is critical for informing national health policy.

OBJECTIVES To measure the burden of diseases, injuries, and leading risk factors in the United States from 1990 to 2010 and to compare these measurements with those of the 34 countries in the Organisation for Economic Co-operation and Development (OECD) countries.

DESIGN We used the systematic analysis of descriptive epidemiology of 291 diseases and injuries, 1160 sequelae of these diseases and injuries, and 67 risk factors or clusters of risk factors from 1990 to 2010 for 187 countries developed for the Global Burden of Disease 2010 Study to describe the health status of the United States and to compare US health outcomes with those of 34 OECD countries. Years of life lost due to premature mortality (YLLs) were computed by multiplying the number of deaths at each age by a reference life expectancy at that age. Years lived with disability (YLDs) were calculated by multiplying prevalence (based on systematic reviews) by the disability weight (based on population-based surveys) for each sequela; disability in this study refers to any short- or long-term loss of health. Disability-adjusted life-years (DALYs) were estimated as the sum of YLDs and YLLs. Deaths

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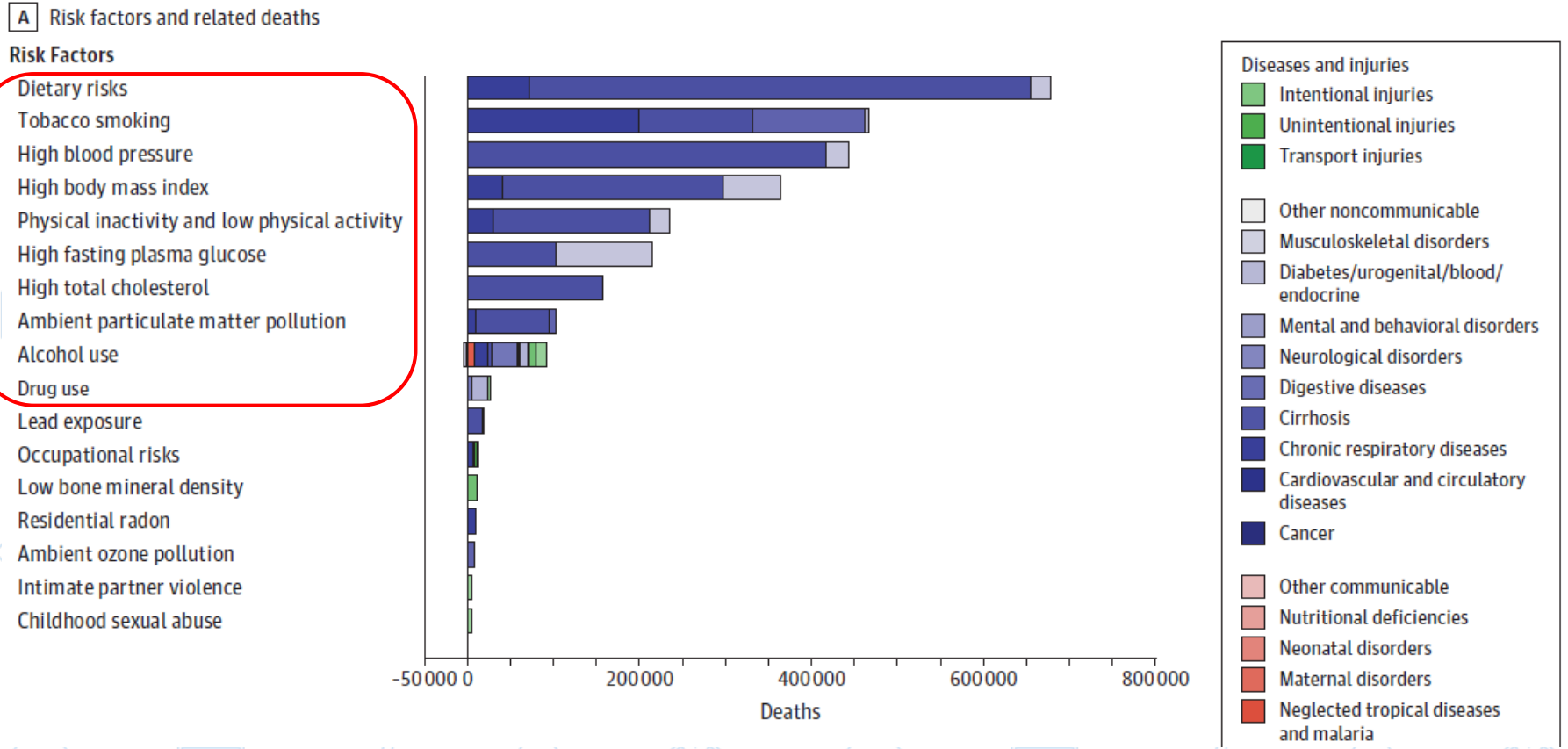
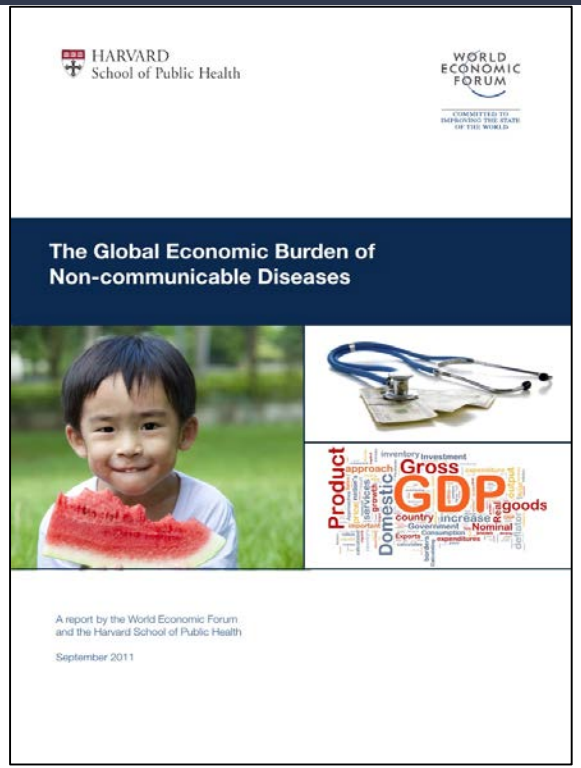
Author Video Interview at jama.com

Supplemental content at jama.com

Figure 3. Number of Deaths and Percentage of Disability-Adjusted Life-Years Related to the 17 Leading Risk Factors in the United States in 2010 for Both Sexes Combined



Modelo no sostenible



"Las enfermedades no transmisibles constituyen una clara amenaza no sólo para la salud humana, sino también al desarrollo y el crecimiento económico de los países"

The Global Economic Burden of Non-communicable Diseases

PREVENCION?

Balancing Life-Style and Genomics Research for Disease Prevention

Walter C. Willett

Genetic and environmental factors, including diet and life-style, both contribute to cardiovascular disease, cancers, and other major causes of mortality, but various lines of evidence indicate that environmental factors are most important. Overly enthusiastic expectations regarding the benefits of genetic research for disease prevention have the potential to distort research priorities and spending for health. However, integration of new genetic information into epidemiologic studies can help clarify causal relations between both life-style and genetic factors and risks of disease. Thus, a balanced approach should provide the best data to make informed choices about the most effective means to prevent disease.

The elucidation of the human genome sequence was an enormous achievement in biomedical research and will certainly lead to more effective disease prevention and treatment strategies. Among the anticipated advances are improved abilities to predict disease through identification of specific biochemical abnormalities that put individuals at risk. In principle, this information could more effectively focus screening and prevention strategies and also lead to "designer" interventions targeted at specific biochemical defects. However, overly enthusiastic expectations regarding the benefits of genetic research for disease prevention have the potential to distort research priorities and spending for health, resulting in both increased costs and suboptimal health. I argue here that the most effective strategies for disease prevention will be based on a balanced integration of new genetic information into epidemiologic studies.

Departments of Epidemiology and Nutrition, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115, USA. E-mail: walter.willett@channing.harvard.edu

Environmental and Genetic Contributions to Complex Human Disease

The relative contributions of genetic variation and nongenetic factors, here considered as "environmental" in the broadest sense, to common diseases such as cancer, heart disease, and psychiatric disorders have been the topic of much research and discussion for decades. These contributions can be expressed as the population-attributable risk percent, meaning the percentage of disease incidence that would be eliminated if the risk factor were removed. Often not appreciated in these discussions is that attributable risks for a complex disease can add to well over 100% because the disease can be avoided in more than one way. Statistically, this can be described as interactions a
risk factors. As an extreme
ic aberration may be neces
to occur, but the disease w
ifest without the presence
tal risk factor. Thus, the at
the genetic aberration and
factor would both be 100%
is a classic case: the clini
avoided either by not havi
tation or by eliminating p
the diet.

For most diseases contr
ly to mortality in Western
demiologists have long k
netic factors have high att
ten at least 80 or 90%, ever
etiologic factors are not c
from observations that rate
diseases and major cancer
fold among various pop
when groups migrate from
countries, their disease ra
change to those of the ne
2). Dramatic changes in dis
country over time also highlight the importance of environmental factors. For example, in the 1950s age-adjusted colon cancer mortality rates in Japan were less than one-fifth

For most diseases contributing importantly to mortality in Western populations, epidemiologists have long known that nongenetic factors have high attributable risks, often at least 80 or 90%, even when the specific etiologic factors are not clear. This follows from observations that rates of cardiovascular diseases and major cancers differ 5- to 100-fold among various populations and that when groups migrate from low- to high-risk countries, their disease rates almost always change to those of the new environment (*1*,

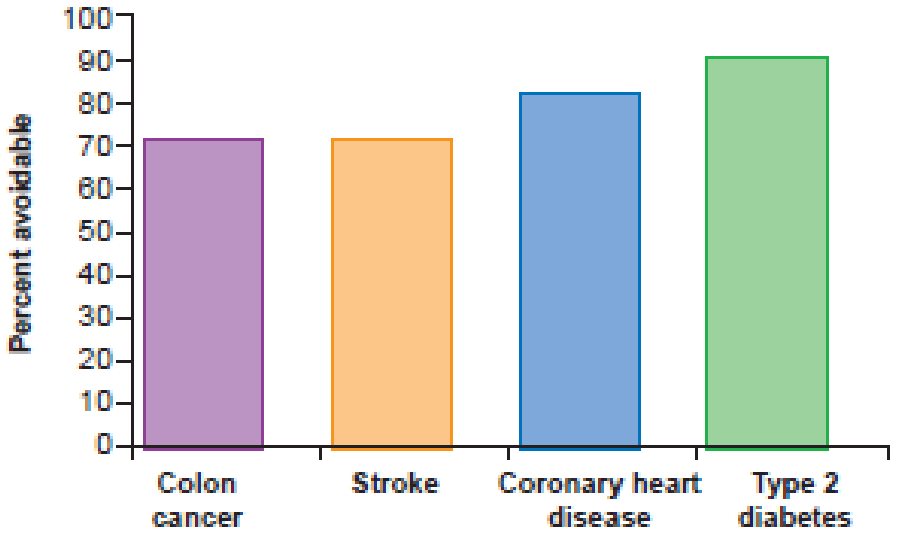

JANUARY 18, 2010
Joe Klein: The CIA's Afghan Disaster
Yemen: The New Center Of Terror
Why the Recession Hasn't Been Cool To Teens
TIME
WHY YOUR DNA ISN'T YOUR DESTINY
The new science of epigenetics reveals how the choices you make can change your genes —and those of your kids
BY JOHN CLOUD
www.time.com

Reducción de Riesgo con Estilo de Vida

*IMC < 25
*30 minutos de ejercicio/día
*Acido fólico 100 mcg/d
*No TBQ
*<3 unidades de OH/día
*<3 porciones de carne roja/sem

*No TBQ
*IMC < 25
*30 minutos de ejercicio/día
*<3 unidades de OH/día
*Nutrición: no grasas saturadas y trans. Si poliinsaturadas. Bajo índice glucémico. Cereales

*IMC < 25
*30 minutos de ejercicio/día
*No TBQ
*<3 unidades de OH/día
*Nutrición



M.J. Stampfer, F.B Hu, W.C. Willett, NEJM. 345, 790 (2001)
E.A. Platz et al., Cancer Causes Control 11, 579 (2000)
F.B. Hu et al., NEJM 345, 790 (2001)

ORIGINAL INVESTIGATION

HEALTH CARE REFORM

Healthy Living Is the Best Revenge

Findings From the European Prospective Investigation Into Cancer and Nutrition–Potsdam Study

Earl S. Ford, MD, MPH; Manuela M. Bergmann, PhD; Janine Kröger; Anja Schienkiewitz, PhD, MPH; Cornelia Weikert, MD, MPH; Heiner Boeing, PhD, MSPH

Background: Our objective was to describe the reduction in relative risk of developing major chronic diseases such as cardiovascular disease, diabetes, and cancer associated with 4 healthy lifestyle factors among German adults.

Methods: We used data from 23 153 German participants aged 35 to 65 years from the European Prospective Investigation Into Cancer and Nutrition–Potsdam study. End points included confirmed incident type 2 diabetes mellitus, myocardial infarction, stroke, and cancer. The 4 factors were never smoking, having a body mass index lower than 30 (calculated as weight in kilograms divided by height in meters squared), performing 3.5 h/wk or more of physical activity, and adhering to healthy dietary principles (high intake of fruits, vegetables, and whole-grain bread and low meat consumption). The 4 factors (healthy, 1 point; unhealthy, 0 points) were summed to form an index that ranged from 0 to 4.

Results: During a mean follow-up of 7.8 years, 2006 participants developed new-onset diabetes (3.7%), myocardial infarction (0.9%), stroke (0.8%), or cancer (3.8%). Fewer than 4% of participants had zero healthy factors, most had 1 to 3 healthy factors, and approximately 9% had 4 factors. After adjusting for age, sex, educational status, and occupational status, the hazard ratio for developing a chronic disease decreased progressively as the number of healthy factors increased. Participants with all 4 factors at baseline had a 78% (95% confidence interval [CI], 72% to 83%) lower risk of developing a chronic disease (diabetes, 93% [95% CI, 88% to 95%]; myocardial infarction, 81% [95% CI, 47% to 93%]; stroke, 50% [95% CI, –18% to 79%]; and cancer, 36% [95% CI, 5% to 57%]) than participants without a healthy factor.

Conclusion: Adhering to 4 simple healthy lifestyle factors can have a strong impact on the prevention of chronic diseases.

Arch Intern Med. 2009;169(15):1355-1362

--EPIC--

*23153 Alemanes (35- 65 años)

*Seguimiento por 8 años

-Metas-

*No TBQ

*IMC <30

*Actividad física 3.5 horas/semana

* Alimentación
  - Frutas y vegetales
  - Pan de granos enteros
  - Bajo consumo de carne

*Resultados: (con 4 factores)
  - Diabetes -93%
  - Infarto al miocardio -81%
  - ECV -50%
  - Cancer -36%

Resultados EPIC

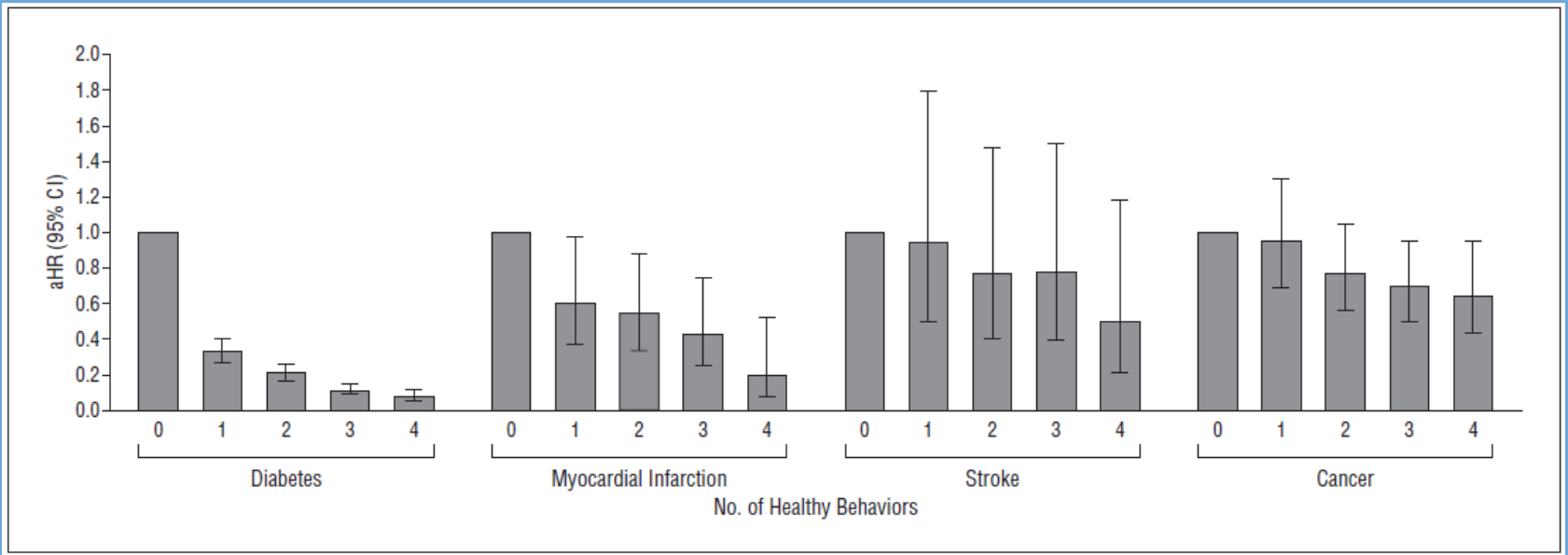


Figure 3. Adjusted hazard ratios (aHRs) and 95% confidence intervals (CIs) for incident diabetes, myocardial infarction, stroke, and cancer by number of healthy factors. Data for 23 153 participants aged 35 to 65 years from the European Prospective Investigation Into Cancer and Nutrition–Potsdam study were used. Results are stratified by age and adjusted for sex, educational status, and occupational status.

Combined Impact of Health Behaviours and Mortality in Men and Women: The EPIC-Norfolk Prospective Population Study

Kay-Tee Khaw[1]*, Nicholas Wareham[2], Sheila Bingham[3], Ailsa Welch[1], Robert Luben[1], Nicholas Day[1]

1 Department of Public Health and Primary Care, Institute of Public Health, University of Cambridge School of Clinical Medicine, Cambridge, United Kingdom, **2** Medical Research Council, Epidemiology Unit, Cambridge, United Kingdom, **3** Medical Research Council, Dunn Nutrition Unit, Cambridge, United Kingdom

Funding: EPIC-Norfolk is supported by programme grants from Medical Research Council and Cancer Research United Kingdom with additional support from the Stroke Association, British Heart Foundation, Research Into Ageing, and the Academy of Medical Science. The sponsors had no role in the design and conduct of the study, collection, management, analysis and interpretation of the data, and preparation, review, or approval of the manuscript.

Competing Interests: The authors have declared that no competing interests exist.

Academic Editor: Alan Lopez, The

ABSTRACT

Background

There is overwhelming evidence that behavioural factors influence health, but their combined impact on the general population is less well documented. We aimed to quantify the potential combined impact of four health behaviours on mortality in men and women living in the general community.

Methods and Findings

We examined the prospective relationship between lifestyle and mortality in a prospective population study of 20,244 men and women aged 45–79 y with no known cardiovascular disease or cancer at baseline survey in 1993–1997, living in the general community in the United Kingdom and followed up to 2006. Participants scored one point for each health

Conclusions

Four health behaviours combined predict a 4-fold difference in total mortality in men and women, with an estimated impact equivalent to 14 y in chronological age.

Health Behaviour	How Scored
Smoking habit	Nonsmoker = 1
Fruit and vegetable intake	Five servings or more daily as indicated by blood vitamin C = ≥50 nmol/l = 1
Alcohol intake	One or more, but less than 14 units, a week = 1. One unit = approximately 8 g of alcohol; i.e., one glass of wine, one small glass of sherry, one single shot of spirits, or one half pint of beer
Physical activity	Not inactive = 1; i.e., if sedentary occupation

Conclusions

Four health behaviours combined predict a 4-fold difference in total mortality in men and women, with an estimated impact equivalent to 14 y in chronological age.

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Fresh Fruit Consumption and Major Cardiovascular Disease in China

Huaidong Du, Ph.D., Liming Li, M.D., M.P.H., Derrick Bennett, Ph.D., Yu Guo, M.Sc., Timothy J. Key, D.Phil., Zheng Bian, M.Sc., Paul Sherliker, B.A., Haiyan Gao, Ph.D., Yiping Chen, D.Phil., Ling Yang, Ph.D., Junshi Chen, M.D., Shanqing Wang, Ph.D., Ranran Du, B.A., Hua Su, M.D., M.P.H., Rory Collins, F.Med.Sci., F.R.C.P.(E.), Richard Peto, F.R.S., and Zhengming Chen, D.Phil., for the China Kadoorie Biobank Study*

ABSTRACT

BACKGROUND

In Western populations, a higher level of fruit consumption has been associated with a lower risk of cardiovascular disease, but little is known about such associations in China, where the consumption level is low and rates of stroke are high.

METHODS

Between 2004 and 2008, we recruited 512,891 adults, 30 to 79 10 diverse localities in China. During 3.2 million person-years

nonfatal), 14,579 ischemic strokes, and 3523 intracerebral hemorrhages were recorded among the 451,665 participants who did not have a history of cardiovascular disease or antihypertensive treatments at baseline. Cox regression yielded adjusted hazard ratios relating fresh fruit consumption to disease rates.

RESULTS

Overall, 18.0% of participants reported consuming fresh fruit daily. As compared with participants who never or rarely consumed fresh fruit (the "nonconsumption" category), those who ate fresh fruit daily had lower systolic blood pressure (by 4.0 mm Hg) and blood glucose levels (by 0.5 mmol per liter [9.0 mg per deciliter]) ($P<0.001$ for trend for both comparisons). The adjusted hazard ratios for daily consumption versus nonconsumption were 0.60 (95% confidence interval [CI], 0.54 to 0.67) for cardiovascular death, and 0.66 (95% CI, 0.58 to 0.75), 0.75 (95% CI, 0.72 to 0.79), and 0.64 (95% CI, 0.56 to 0.74), respectively, for incident major coronary events, ischemic stroke, and hemorrhagic stroke. There was a strong log-linear dose–response relationship between the incidence of each outcome and the amount of fresh fruit consumed. These associations were similar across the 10 study regions and in subgroups of participants defined by baseline characteristics.

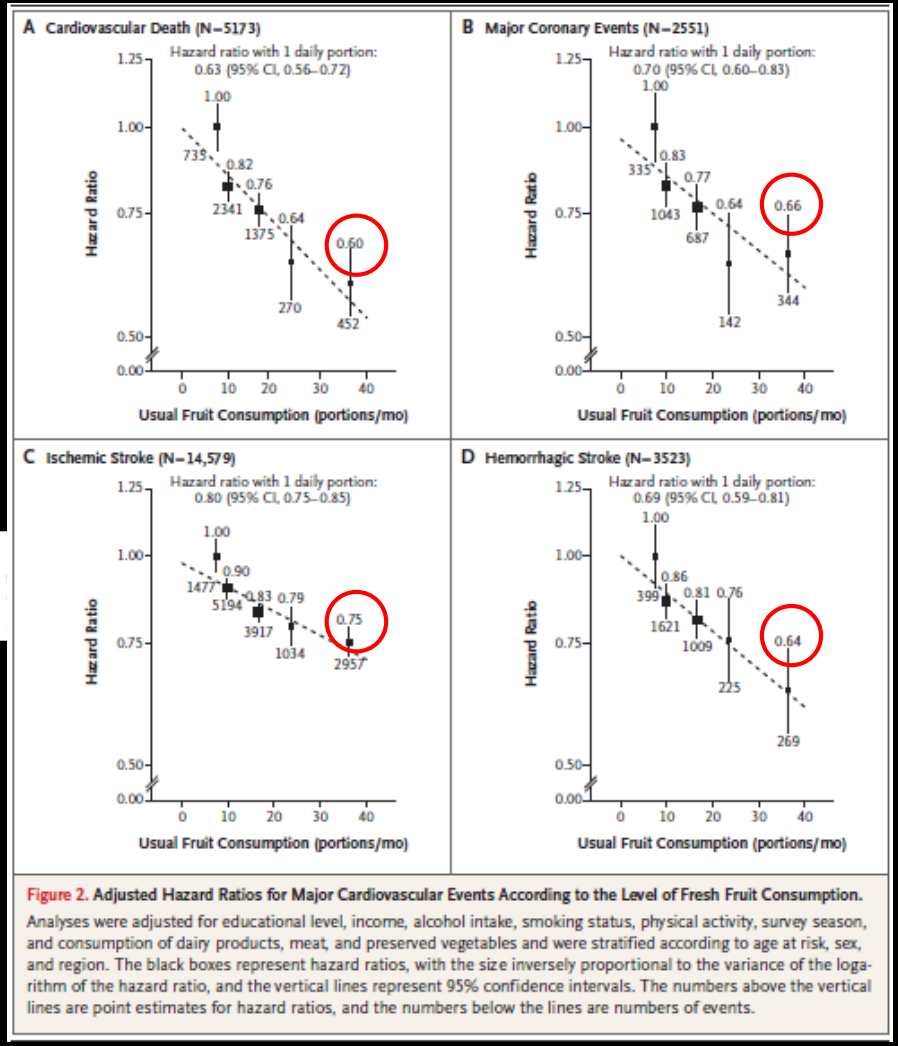


Figure 2. Adjusted Hazard Ratios for Major Cardiovascular Events According to the Level of Fresh Fruit Consumption.

Analyses were adjusted for educational level, income, alcohol intake, smoking status, physical activity, survey season, and consumption of dairy products, meat, and preserved vegetables and were stratified according to age at risk, sex, and region. The black boxes represent hazard ratios, with the size inversely proportional to the variance of the logarithm of the hazard ratio, and the vertical lines represent 95% confidence intervals. The numbers above the vertical lines are point estimates for hazard ratios, and the numbers below the lines are numbers of events.

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Journal of Medicine

VOLUME 346 FEBRUARY 7, 2002 NUMBER 6

REDUCTION IN THE INCIDENCE OF TYPE 2 DIABETES WITH LIFESTYLE INTERVENTION OR METFORMIN

DIABETES PREVENTION PROGRAM RESEARCH GROUP*

ABSTRACT

Background Type 2 diabetes affects approximately 8 percent of adults in the United States. Some risk factors — elevated plasma glucose concentrations in the fasting state and after an oral glucose load, overweight, and a sedentary lifestyle — are potentially reversible. We hypothesized that modifying these factors with a lifestyle-intervention program or the administration of metformin would prevent or delay the development of diabetes.

Methods We randomly assigned 3234 nondiabetic persons with elevated fasting and post-load plasma glucose concentrations to placebo, metformin (850 mg twice daily), or a lifestyle-modification program with the goals of at least a 7 percent weight loss and at least 150 minutes of physical activity per week. The mean age of the participants was 51 years, and the mean body-mass index (the weight in kilograms divided by the square of the height in meters) was 34.0; 68 percent were women, and 45 percent were members of minority groups.

TYPE 2 diabetes mellitus, formerly call
non-insulin-dependent diabetes mellitus,
a serious, costly disease affecting appro
mately 8 percent of adults in the Unit
States.[1] Treatment prevents some of its devastati
complications[2,3] but does not usually restore norm
glycemia or eliminate all the adverse consequenc
The diagnosis is often delayed until complications a
present.[4] Since current methods of treating diabet
remain inadequate, prevention is preferable. The h
pothesis that type 2 diabetes is preventable[5,6] is sup-
ported by observational studies and two clinical tri-
als of diet, exercise, or both in persons at high risk
for the disease[7,8] but not by studies of drugs used to
treat diabetes.[5]

The validity of generalizing the results of previous prevention studies is uncertain.[9] Interventions that work in some societies may not work in others, because social, economic, and cultural forces influence diet and exercise. This is a special concern in the

Methods We randomly assigned 3234 nondiabetic persons with elevated fasting and post-load plasma glucose concentrations to placebo, metformin (850 mg twice daily), or a lifestyle-modification program with the goals of at least a 7 percent weight loss and at least 150 minutes of physical activity per week. The mean age of the participants was 51 years, and the mean body-mass index (the weight in kilograms divided by the square of the height in meters) was 34.0; 68 percent were women, and 45 percent were members of minority groups.

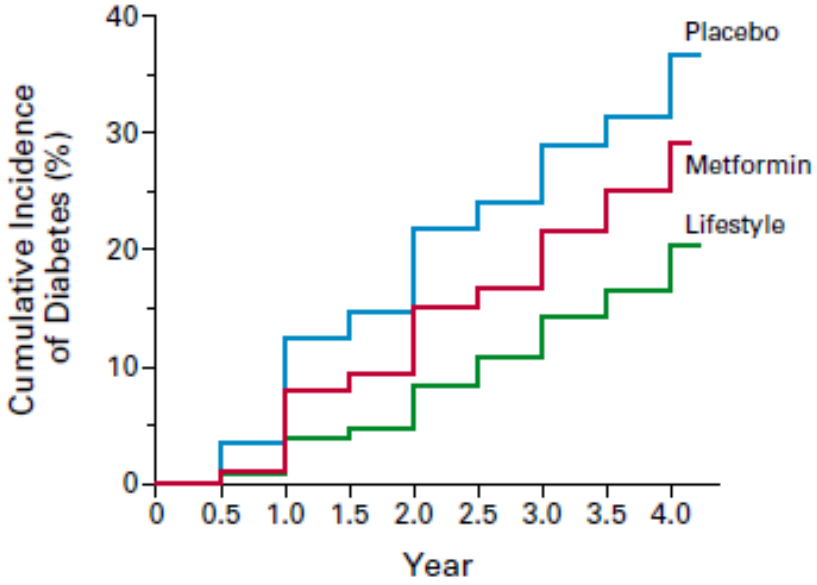


Figure 2. Cumulative Incidence of Diabetes According to Study Group.

The diagnosis of diabetes was based on the criteria of the American Diabetes Association.[11] The incidence of diabetes differed significantly among the three groups ($P<0.001$ for each comparison).

Conclusions Lifestyle changes and treatment with metformin both reduced the incidence of diabetes in persons at high risk. The lifestyle intervention was more effective than metformin. (N Engl J Med 2002; 346:393-403.)

The New England
Journal of Medicine

VOLUME 344 MAY 3, 2001 NUMBER 18

PREVENTION OF TYPE 2 DIABETES MELLITUS BY CHANGES IN LIFESTYLE AMONG SUBJECTS WITH IMPAIRED GLUCOSE TOLERANCE

JAAKKO TUOMILEHTO, M.D., PH.D., JAANA LINDSTRÖM, M.S., JOHAN G. ERIKSSON, M.D., PH.D., TIMO T. VALLE, M.D., HELENA HÄMÄLÄINEN, M.D., PH.D., PIRJO ILANNE-PARIKKA, M.D., SIRKKA KEINÄNEN-KIUKAANNIEMI, M.D., PH.D., MAURI LAAKSO, M.D., ANNE LOUHERANTA, M.S., MERJA RASTAS, M.S., VIRPI SALMINEN, M.S., AND MATTI UUSITUPA, M.D., PH.D., FOR THE FINNISH DIABETES PREVENTION STUDY GROUP

ABSTRACT

Background Type 2 diabetes mellitus is increasingly common, primarily because of increases in the prevalence of a sedentary lifestyle and obesity. Whether type 2 diabetes can be prevented by interventions that affect the lifestyles of subjects at high risk for the disease is not known.

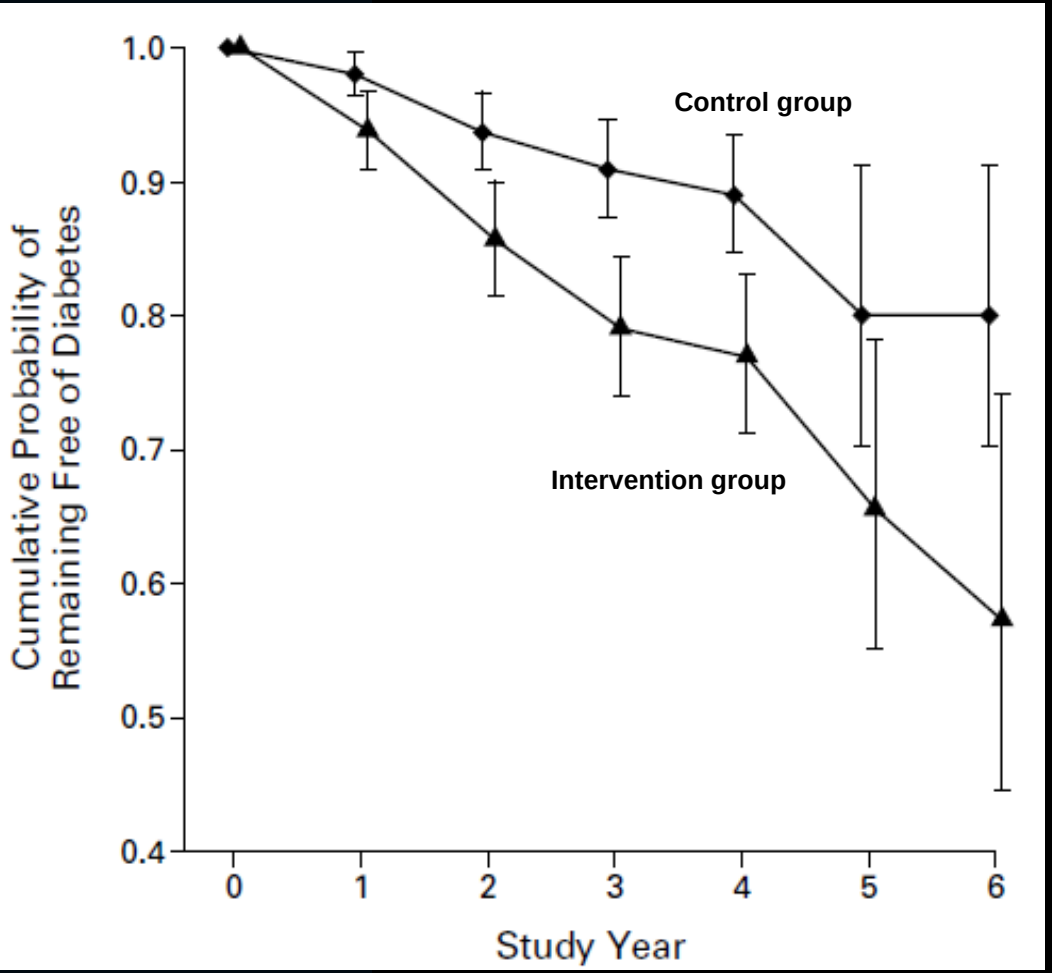
Methods We randomly assigned 522 middle-aged, overweight subjects (172 men and 350 women; mean age, 55 years; mean body-mass index [weight in kilograms divided by the square of the height in meters], 31) with impaired glucose tolerance to either the intervention group or the control group. Each subject in the intervention group received individualized counseling aimed at reducing weight, total intake of fat, and intake of saturated fat and increasing intake of fiber and physical activity. An oral glucose-tolerance test was performed annually; the diagnosis of diabetes was confirmed by a second test. The mean duration of follow-up was 3.2 years.

THE incidence of type 2 diabetes mellitus is increasing worldwide. Type 2 diabetes results from the interaction between a genetic predisposition and behavioral and environmental risk factors.[1] Although the genetic basis of type 2 diabetes has yet to be identified, there is strong evidence that such modifiable risk factors as obesity and physical inactivity are the main nongenetic determinants of the disease.[2-9]

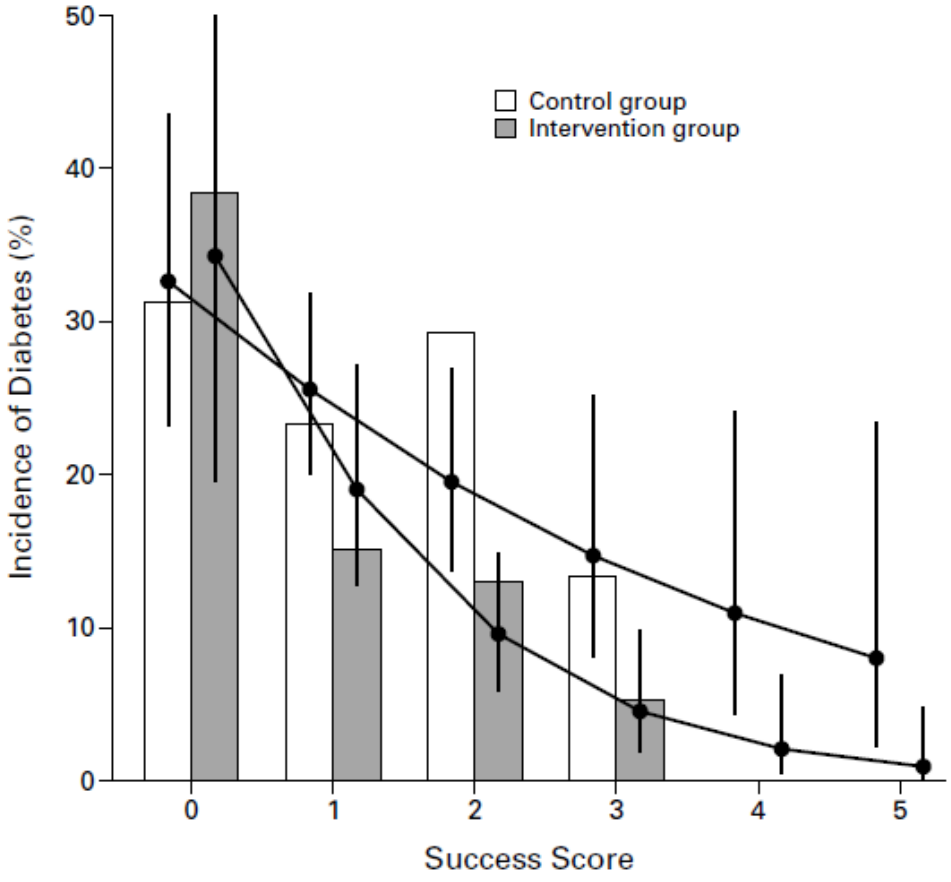
Impaired glucose tolerance is an intermediate category between normal glucose tolerance and overt diabetes,[10,11] and it can be identified by an oral glucose-tolerance test. Subjects with impaired glucose tolerance have an increased risk of type 2 diabetes[12] and therefore form an important target group for interventions aimed at preventing diabetes.[2-5] The Finnish Diabetes Prevention Study was conducted to determine the feasibility and effects of a program of chang-

TABLE 4. SUCCESS IN ACHIEVING THE GOALS OF THE INTERVENTION BY ONE YEAR, ACCORDING TO TREATMENT GROUP.*

GOAL	INTERVENTION GROUP	CONTROL GROUP	P VALUE†
	% of subjects		
Weight reduction >5%	43	13	0.001
Fat intake <30% of energy intake	47	26	0.001
Saturated-fat intake <10% of energy intake	26	11	0.001
Fiber intake ≥15 g/1000 kcal	25	12	0.001
Exercise >4 hr/wk‡	86	71	0.001



percent) in the control group. During the trial, the risk of diabetes was reduced by 58 percent ($P<0.001$) in the intervention group. The reduction in the incidence of diabetes was directly associated with changes in lifestyle.



No. with Diabetes/Total No.						
Intervention group	5/13	10/66	9/69	2/38	0/25	0/24
Control group	15/48	25/107	14/48	2/15	0/11	0/4

Feds approve Y's diabetes program despite drug maker opposition

Jayne O'Donnell, USA TODAY Published 4:19 p.m. ET Nov. 2, 2016 | **Updated 6:47 p.m. ET Nov. 2, 2016**

(Photo: moodboard, via Getty Images)

WASHINGTON — Federal regulators will move ahead with a national test of Medicare coverage for a YMCA diabetes prevention program over the objections of the pharmaceutical industry, which sells drugs including increasingly expensive insulin to treat disease.

The final rule (https://www.federalregister.gov/documents/2016/11/15/2016-26668/medicare-program-revisions-to-payment-policies-under-the-physician-fee-schedule-and-other-revisions), announced Wednesday by the Centers for Medicare and Medicaid Services, is designed to speed Medicare coverage of a program to combat a disease that a quarter of people 65 and older have. National trade associations representing hospitals and doctors enthusiastically supported CMS' plan in comments filed with the agency.

The Pharmaceutical Research and Manufacturers of America (PhRMA) trade group, however, said in its comments that CMS is setting a "flawed precedent" and acting upon only "preliminary" evidence. A federal contractor studied the program for at least two years and the National Institutes of Health (NIH) and the Centers for Disease Control (CDC) analyzed it for about 20 years before that.

SOLO PREVENCION?

DIABETICMedicine

DOI: 10.1111/dme.12116

Short Report: Treatment

Population response to information on reversibility of Type 2 diabetes

S. Steven, E. L. Lim and R. Taylor

Magnetic Resonance Centre, Institute of Cellular Medicine, Newcastle University, Newcastle upon Tyne, UK

Accepted 10 January 2013

Abstract

Aims Following publication of the Counterpoint Study (on the reversibility of Type 2 diabetes using a very low energy diet), the extent of public interest prompted the authors to make available, on a website, general information about reversing diabetes. Shortly thereafter, individuals began to feed back their personal experiences of attempting to reverse their diabetes. We have collated this information on the effects of energy restriction in motivated individuals with Type 2 diabetes that has been achieved outside a research setting.

Methods Emails, letters and telephone communications received between July 2011 and September 2012 were evaluated (n = 77: 66 men, 11 women). Median diabetes duration was 5.5 years (3 months–28 years). Reversal of diabetes was defined as achieving fasting capillary blood glucose < 6.1 mmol/l and/or, if available, HbA_{1c} less than 43 mmol/mol (6.1%) off treatment.

Results Self-reported weight fell from 96.7 ± 17.5 kg at baseline to 81.9 ± 14.8 kg after weight loss (P < 0.001). Self-reported fasting blood glucose levels fell from 8.3 mmol/l (5.9–33.0) to 5.5 mmol/l (4.0–10.0) after the weight loss period (P < 0.001). Diabetes reversal was considered to have occurred in 61% of the population. Reversal of diabetes was observed in 80, 63 and 53% of those with > 20, 10–20 and < 10 kg weight loss, respectively. There was a significant correlation between degree of weight loss and reported fasting glucose levels (Rs –0.38, P = 0.006). Reversal rates according to diabetes duration were: short (< 4 years) = 73%, medium (4–8 years) = 56% and long (> 8 years) = 43%.

Conclusion These data demonstrate that intentional weight loss achieved at home by health-motivated individuals can reverse Type 2 diabetes. Diabetes reversal should be a goal in the management of Type 2 diabetes.

- 88 PERSONAS
- Remisión 61% del total
- Remisión 80% → > 20 Kg
- 63% → 10 - 20 Kg
- 53% → < 10Kg
- Duración:
- 73% → <4 años
- 56% → 4 - 8 años
- 43% → > 8 años

Original Article

High rates of diabetes reversal in newly diagnosed Asian Indian young adults with type 2 diabetes mellitus with intensive lifestyle therapy

collecte
possibil
daily ca
15% as
1 h eve
who with HbA1
insulin, remaini
plasma glucose
for a minimum
and 22 (68.75%
partial reversal
and 21.9%, res
should receive

Key words: Int

- Remisión 75%
  - Completa 53%
  - Parcial 22%

See comment in PubMed Commons below
Am J Clin Nutr. 1979 Nov;32(11):2312-21.

High-carbohydrate, high-fiber diets for insulin-treated men with diabetes mellitus.

Anderson JW, Ward K.

Abstract

The effects of high-carbohydrate, high plant fiber (HCF) diets on glucose and lipid metabolism of 20 lean men receiving insulin therapy for diabetes mellitus were evaluated on a metabolic ward. All men received control diets for an average of 7 days followed by HCF diets for an average of 16 days. Diets were designed to be weight-maintaining and there were no significant alterations in body weight. The daily dose of insulin was lower for each patient on the HCF diet than on the control diet. The average insulin dose was reduced from 26 +/- 3 units/day (mean +/- SEM) on the control diets to 11 +/- 3 (P less than 0.001) on the HCF diets. On the HCF diets, insulin therapy could be discontinued in nine patients receiving 15 to 20 units/day and in two patients receiving 32 units/day. Fasting and 3-hr postprandial plasma glucose values were lower in most patients on the HCF diets than on the control diets despite lower insulin doses. Serum cholesterol values dropped from 206 +/- 10 mg/dl on the control diets to 147 +/- 5 (P less than 0.001) on the HCF diet; average fasting serum triglyceride values were not significantly altered on the HCF diets. These studies suggest that HCF diets may be the dietary therapy of choice for certain patients with the maturity-onset type of diabetes.

- 20 hombres con DM2, en tratamiento con insulina
- Dieta control por 7 días
- Alimentación basada en plantas por 16 días ISOCALÓRICA
- 26 unidades de insulina en promedio al inicio
- 11 unidades de insulina en promedio al terminar
- Suspensión de insulina
  - 9 pacientes que iniciaron con 15 - 20 unidades/día de insulina
  - 2 pacientes que iniciaron con 32 unidades/día de insulina
- Colesterol total promedio inició en 206 mg/dl y bajó a 147 mg/dl en promedio

Caldwell B. Esselstyn Jr, MD; Gina Gendy, MD; Jonathan Doyle, MCS; Mladen Golubic, MD, PhD; Michael F. Roizen, MD
The Wellness Institute of the Cleveland Clinic, Lyndhurst, Ohio

aesselstyn@aol.com

The authors reported no potential conflict of interest relevant to this article.

ORIGINAL RESEARCH

A way to reverse CAD?

Though current medical and surgical treatments manage coronary artery disease, they do little to prevent or stop it. Nutritional intervention, as shown in our study and others, has halted and even reversed CAD.

Outcomes		
Improved	144 (81)	0 (0)
Symptom reduction	105 (94)†	0 (0)
Reversal‡	39 (22)	
Stable	15 (8)	8 (38)
Worse§	18 (10)	13 (62)

Restoration of myocardial perfusion[2]

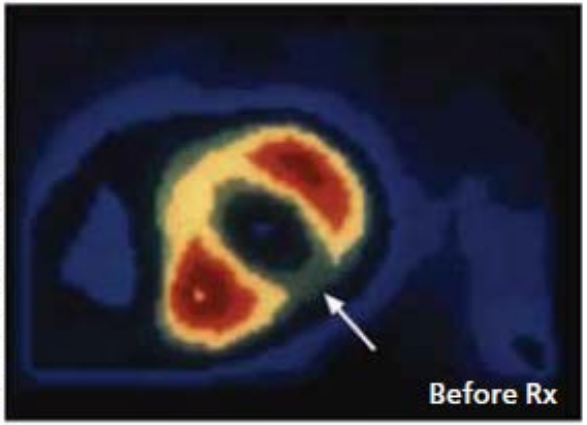
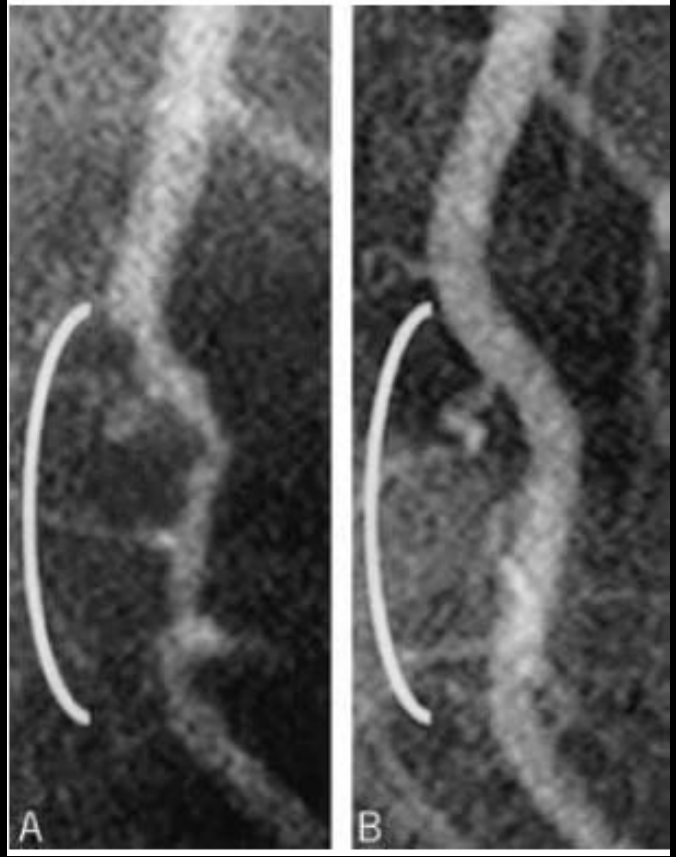


FIGURE 1 FROM: *PREVENT AND REVERSE HEART DISEASE* BY CALDWELL B. ESSELSTYN, JR., M.D., COPYRIGHT © 2007 BY CALDWELL B. ESSELSTYN, JR., M.D. USED WITH PERMISSION OF AVERY PUBLISHING, AN IMPRINT OF PENGUIN GROUP (USA) LLC

Reversal of coronary artery disease[4]



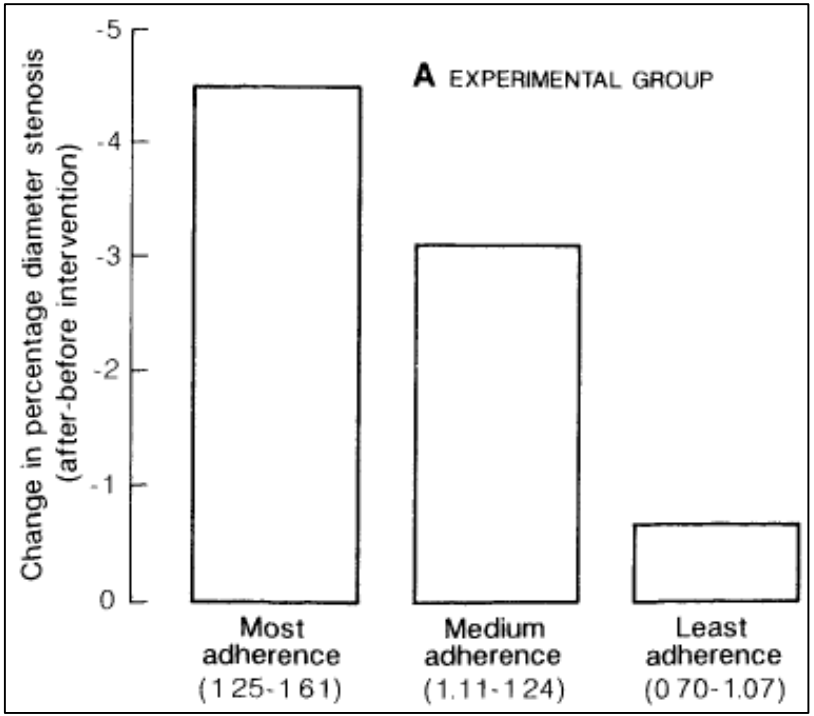
MEDICAL SCIENCE

Can lifestyle changes reverse coronary heart disease?

The Lifestyle Heart Trial

28 pacientes en el grupo experimental

- Dieta vegetariana baja en grasas
- Suspender TBQ
- Manejo de stress
- Ejercicio moderado



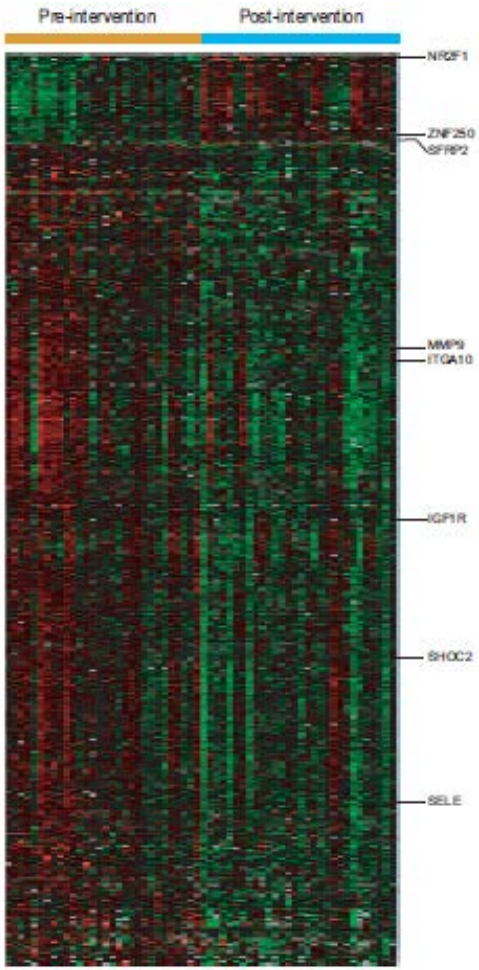
Lancet 1990; **336**: 129-33.

Changes in prostate gene expression in men undergoing an intensive nutrition and lifestyle intervention

Dean Ornish*†‡, Mark Jesus M. Magbanua§, Gerdi Weidner*, Vivian Weinberg¶, Colleen Kemp*, Christ
Michael D. Mattie§, Ruth Marlin*, Jeff Simko, Katsuto Shinohara§, Christopher M. Haqq§ and Peter R.

31 pacientes en el grupo experimental

- Dieta vegetariana baja en grasas
- Suspender TBQ
- Manejo de stress
- Ejercicio moderado



FROM THE EDITOR

An Agent with Lipid-Lowering, Antihypertensive, Positive Inotropic, Negative Chronotropic, Vasodilating, Diuretic, Anorexigenic, Weight-Reducing, Cathartic, Hypoglycemic, Tranquilizing, Hypnotic and Antidepressive Qualities

William C. Roberts

William C. Roberts, MD
Editor-in-Chief

American Journal of Cardiology ***1984;*** *53: 261-262*

Percutaneous Coronary Angioplasty Compared With Exercise Training in Patients With Stable Coronary Artery Disease

A Randomized Trial

Rainer Hambrecht, MD; Claudia Walther, MD; Sven Möbius-Winkler, MD; Stephan Gielen, MD; Axel Linke, MD; Katrin Conradi, MD; Sandra Erbs, MD; Regine Kluge, MD; Kai Kendziorra, MD; Osama Sabri, MD; Peter Sick, MD; Gerhard Schuler, MD

Background—Regular exercise in patients with stable coronary artery disease has been shown to improve myocardial perfusion and to retard disease progression. We therefore conducted a randomized study to compare the effects of exercise training versus standard percutaneous coronary intervention (PCI) with stenting on clinical symptoms, angina-free exercise capacity, myocardial perfusion, cost-effectiveness, and frequency of a combined clinical end point (death of cardiac cause, stroke, CABG, angioplasty, acute myocardial infarction, and worsening angina with objective evidence resulting in hospitalization).

Methods and Results—A total of 101 male patients aged ≤70 years were recruited after routine coronary angiography and randomized to 12 months of exercise training (20 minutes of bicycle ergometry per day) or to PCI. Cost efficiency was

Conclusions—Compared with PCI, a 12-month program of regular physical exercise in selected patients with stable coronary artery disease resulted in superior event-free survival and exercise capacity at lower costs, notably owing to reduced rehospitalizations and repeat revascularizations. (***Circulation***. **2004;109:1371-1378.**)

Conclusions—Compared with PCI, a 12-month program of regular physical exercise in selected patients with stable coronary artery disease resulted in superior event-free survival and exercise capacity at lower costs, notably owing to reduced rehospitalizations and repeat revascularizations. (***Circulation***. **2004;109:1371-1378.**)

Key Words: coronary disease ■ exercise ■ angina ■ angioplasty ■ cost-benefit analysis

BASIC SCIENCES

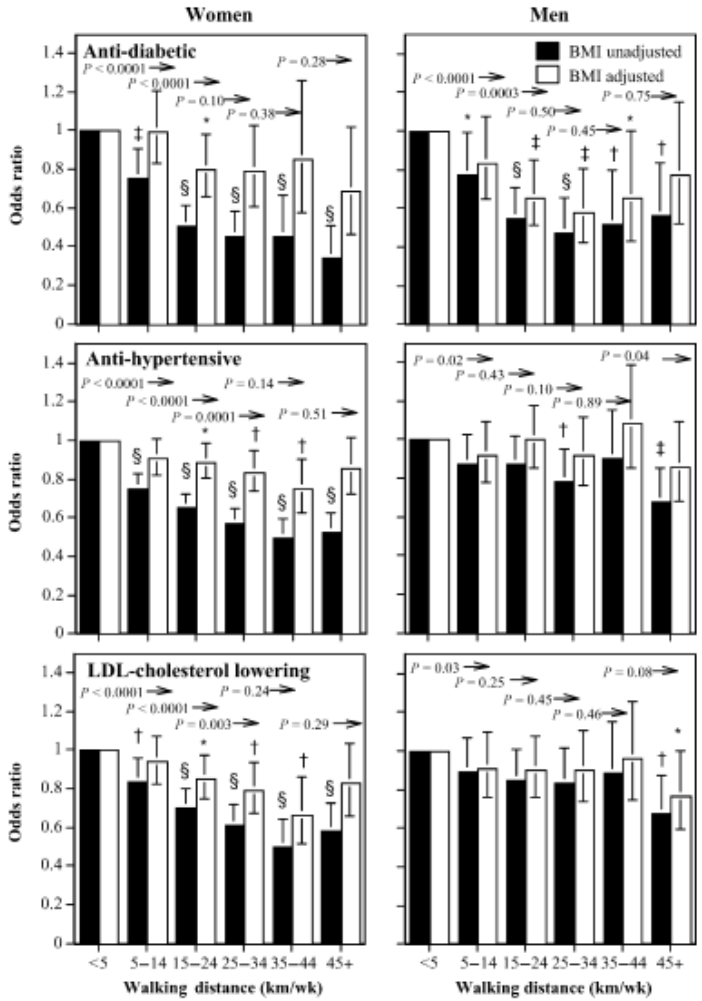
Epidemiology

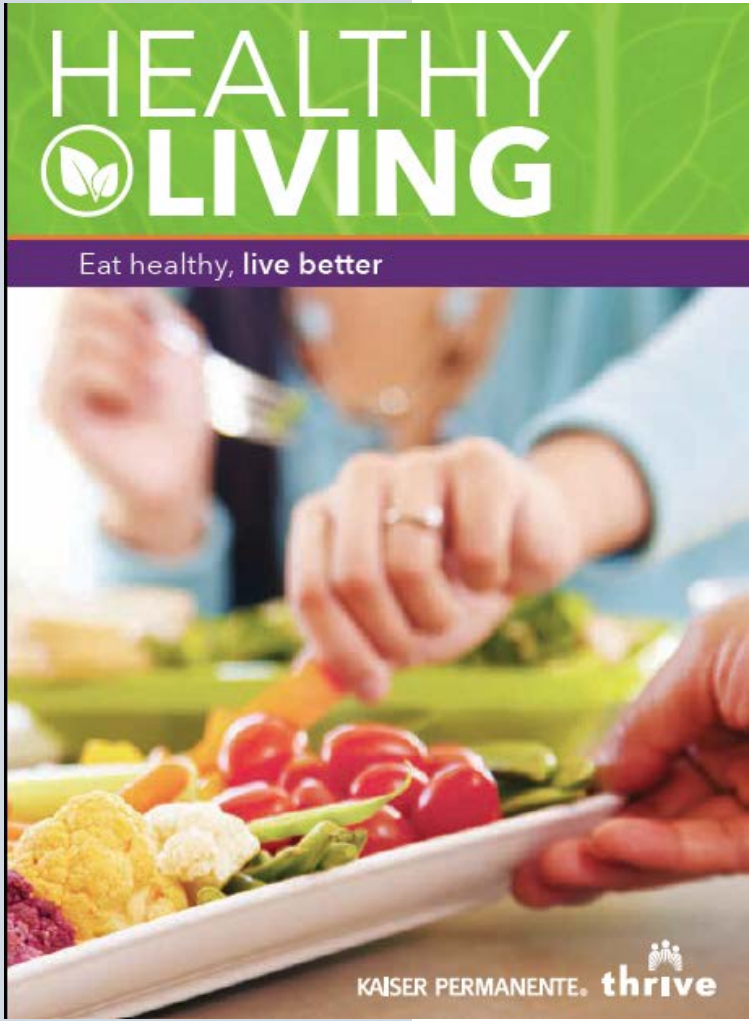
Reduced Diabetic, Hypertensive, and Cholesterol Medication Use with Walking

PAUL T. WILLIAMS

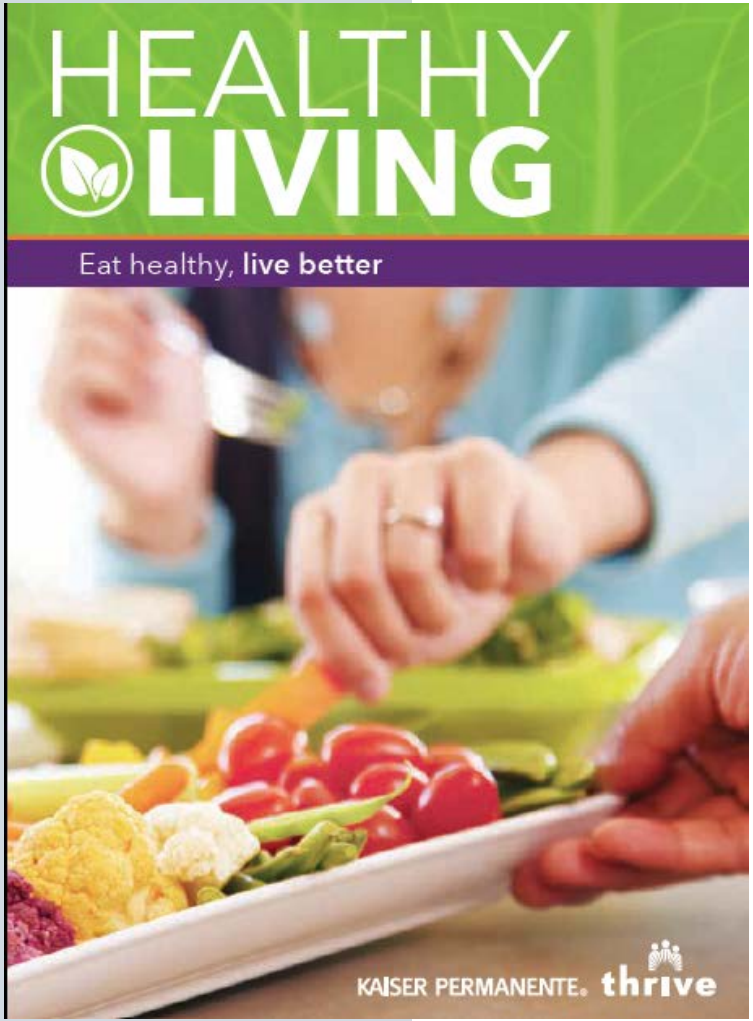
Donner Laboratory, Life Sciences Division, Ernest Orlando Lawrence Berkeley Laboratory, Berkeley, CA

"los resultados son consistentes con la hipótesis de que los medicamentos para la hipertensión, diabetes y para el colesterol pueden ser sustancialmente reducidos al realizar caminatas en forma regular"


Women
Men
BMI unadjusted
BMI adjusted
Anti-diabetic
Anti-hypertensive
LDL-cholesterol lowering
Odds ratio
Walking distance (km/wk)
<5
5–14
15–24
25–34
35–44
45+



- Desea perder peso?
- Quiere sentirse mejor?
- Quiere prevenir, controlar o incluso revertir una enfermedad crónica, como enfermedad coronaria, colesterol elevado, diabetes o hipertensión arterial?
- Le gustaría tomar menos medicamentos?
- Consideraría cambiar su alimentación si eso realmente mejorara su salud?



BENEFICIOS

- Disminuir niveles de glucosa, presión arterial, colesterol y triglicéridos
- Prevención y reversión de enfermedad cardiovascular
- Disminución en el uso de medicamentos
- Mayor expectativa de vida
- Peso saludable
- Menor riesgo de diabetes y cáncer
- Mejoría en los síntomas de la artritis

L.L.B

Sexo: Masculino

Edad: 42 años.

Ocupación: QCB

Act. física : Sedentaria.

Antecedentes médicos :

- DM2 de 20 años de diagnóstico con complicaciones: Neuropatía periférica, retinopatía proliferativa, gastroparesia
- CAD hace 4 meses
- Obesidad
- Hipertensión Arterial
- Hiperlipidemia

Farmacológicos:

- Lisinopril / HCTZ 12.5mg/20mg /día
- Insulina glargina 100 UI/día
- Insulina aspart 15 - 15 - 15
- Metformina 2gr / día
- Simvastatina 10mg / día
- Esomeprazol 80mg / día
- Tramadol 100mg / día

	Antes
Peso	105.6 kg
IMC	34.5 kg/m2
Glucosa	288 mg/dl
HbA1C	12.2%
Colesterol total	254 mg/dl
CLDL	184 mg/dl
CHDL	45 mg/dl

CLÍNICA
DEL ESTILO DE VIDA

Media de glicemias capilares

CLÍNICA
DEL ESTILO DE VIDA

- **Programa :**
  - Plan de alimentación basado en plantas, con bajo índice glucémico, alto en fibra.
  - Ejercicio de bajo impacto a baja intensidad 400 Minutos/semana
  - Manejo del estrés

- **Manejo farmacológico :**
  - Amlodipino 5mg VO cada 12 horas
  - Metformina 1gr cada 12 horas

	Antes	Después
Peso	105.6 kg	103.3 kg
IMC	34.5 kg/m2	33.7 kg/m^2
Glucosa	288 mg/dl	113 mg/dl
HbA1C	12.2%	-
Colesterol total	254 mg/dl	204 mg/dl
CLDL	184 mg/dl	125 mg/dl
CHDL	45 mg/dl	52 mg/dl

CLÍNICA
DEL ESTILO DE VIDA

hola@clinicadelestilodevida.org
+52 (826) 2637862

VI Congreso Internacional de Educación Médica

Taller: Medicina de Estilo de Vida: una respuesta a la educación médica del futuro.

Como integrar la Medicina de Estilo de Vida en el currículo