Mass Field Trials of the Diet-Heart Question

Their Significance, Timeliness, Feasibility and Applicability

AN ASSESSMENT OF SEVEN PROPOSED EXPERIMENTAL DESIGNS


Published by the AMERICAN HEART ASSOCIATION, INC.
Dietary Guidelines for Healthy American Adults

A Statement for Health Professionals From the Nutrition Committee, American Heart Association

Ronald M. Krauss, MD, Chair; Richard J. Deckelbaum, MD; Nancy Ernst, RD; Edward Fisher, MD; Barbara V. Howard, PhD; Robert H. Knopp, MD; Theodore Kotchen, MD; Alice H. Lichtenstein, DSc; Henry C. McGill, MD; Thomas A. Pearson, MD, PhD; T. Elaine Prewitt, DPH; Neil J. Stone, MD; Linda Van Horn, PhD, RD; Richard Weinberg, MD, Members

In 1957 the American Heart Association proposed that modification of dietary fat intake would reduce the incidence of coronary heart disease (CHD), which had become the leading cause of disability and death in the United States and other industrialized countries. Therefore, the AHA has issued seven policy statements on diet and CHD as reliable new information has become available. In each of these statements emphasis was placed on consumption of total fat, saturated and certain unsaturated fatty acids, dietary cholesterol, and sodium because of their significant contribution to risk of CHD. Later, excessive alcohol intake was considered because of its association with hypertension, stroke, and other diseases. Such knowledge has encouraged other health organizations and the federal government to make similar recommendations.

In May 1989 representatives of nine health organizations and governmental bodies met under the aegis of the AHA, reviewed the scientific evidence, and concluded that most Americans can improve their overall health and maintain it with a few specific but fundamental dietary changes. The following guidelines are consistent with those promoted by each organization:

- Eat a nutritionally adequate diet consisting of a variety of foods.
- Reduce consumption of fat, especially saturated fat, and cholesterol.
- Achieve and maintain an appropriate body weight.
- Increase consumption of complex carbohydrates and dietary fiber.
- Reduce intake of sodium.
- Consume alcohol in moderation, if at all. Children, adolescents, and pregnant women should abstain.

Current AHA recommendations regarding diet and related lifestyle practices for the general population are based on evidence indicating that modification of specific risk factors will decrease incidence of CHD. These risk factors include cigarette smoking; elevated levels of plasma cholesterol, particularly low-density lipoprotein (LDL) cholesterol; low levels of high-density lipoprotein (HDL) cholesterol; increased blood pressure; diabetes mellitus; obesity, especially visceral adiposity; and physical inactivity.

To reduce the impact of these risk factors on the occurrence of CHD in the general population, in 1996 the AHA recommends the following population-wide dietary and lifestyle goals:

- Elimination of cigarette smoking
- Appropriate levels of caloric intake and physical activity to prevent obesity and reduce weight in those who are overweight
- Consumption of 30% or less of the day’s total calories from fat
- Consumption of 8% to 10% of total calories from saturated fatty acids
- Consumption of up to 10% of total calories from polyunsaturated fatty acids
- Consumption of up to 15% of total calories from monounsaturated fatty acids
- Consumption of less than 300 mg/d of cholesterol
- Consumption of no more than 2.4 g/d of sodium
- Consumption of 55% to 60% of calories as complex carbohydrates
- For those who drink and those for whom alcohol (ethanol) is not contraindicated, consumption should not exceed 2 drinks (1 to 2 oz of ethanol) per day

Dietary Guidelines for Americans

In formulating the following dietary recommendations, the AHA Nutrition Committee endeavored to make them consistent with those issued by the US Dietary Guideline Committee. Although the AHA guidelines were developed specifically for prevention of heart and blood vessel disease, they can contribute to prevention of other diseases, including some forms of cancer, renal disease, and osteoporosis. The AHA guidelines are also consistent with current recommendations for prevention and management of diabetes. These chronic diseases account for the majority of the morbidity and mortality in the population, highlighting the importance of providing the public with scientifically based dietary and lifestyle guidelines.
The National Diet-Heart Study Final Report

NATIONAL DIET-HEART STUDY RESEARCH GROUP WITH THE APPROVAL OF THE EXECUTIVE COMMITTEE ON DIET AND HEART DISEASE

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THE AMERICAN HEART ASSOCIATION, INC., NEW YORK 1968
Cardiovascular Disease Risk Factor Variables During the First Year of Life

Gerald S. Berenson, MD; Caroline V. Blonde, MD, MPH; Rosanne P. Farris, RD; Theda A. Foster, MS; Gail C. Frank, RD, MPH; Sathanur R. Srinivasan, PhD; Antonie W. Voors, MD, DPH; Larry S. Webber, PhD
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AND FRØYSTEIN WEDERVANG, CAND. OECON.

BERGEN
A. S. JOHN GRIEG BOKTRYKKERI

Acta Medica, 1957, Suppl. 321
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Society of Actuaries

Blood Pressure and Build

Volume I
The Coronary Drug Project

Initial Findings Leading to Modifications of Its Research Protocol

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Lewis K. Dahl, M.D.
and
Robert A. Love, M.D., Upton, N. Y.
The Framingham Study

The Epidemiology of Atherosclerotic Disease

Thomas Royle Dawber

A COMMONWEALTH FUND BOOK

Harvard University Press
Cambridge, Massachusetts
and
London, England
1980
II. Coronary Heart Disease in the Framingham Study

THOMAS R. DAWBER, M.D.; FELIX E. MOORE, F.A.P.H.A.; and
GEORGE V. MANN, M.D.
Diet and Health

Implications for Reducing Chronic Disease Risk

Committee on Diet and Health
Board on Agriculture and Life Sciences
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National Research Council

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DIETARY GOALS FOR THE UNITED STATES
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A STUDY OF THE AETIOLOGY OF CARCINOMA OF THE LUNG

BY

RICHARD DOLL, M.D., M.R.C.P.
Member of the Statistical Research Unit of the Medical Research Council

AND

A. BRADFORD HILL, C.B.E., Ph.D., D.Sc.
Professor of Medical Statistics, London School of Hygiene and Tropical Medicine; Honorary Director of the Statistical Research Unit of the Medical Research Council
Mortality in relation to smoking: 20 years' observations on male British doctors

RICHARD DOLL, RICHARD PETO

British Medical Journal, 1976, 2, 1525-1536
PATHOGENESIS OF CORONARY DISEASE IN AMERICAN SOLDIERS KILLED IN KOREA

and
Robert H. Holmes, M.D., Washington, D. C.

J.A.M.A., July 16, 1955
Coronary Heart Disease Epidemiology Revisited

Clinical and Community Aspects

By Frederick H. Epstein, M.D.
Predicting, Explaining, and Preventing Coronary Heart Disease

AN EPIDEMIOLOGICAL VIEW

Frederick H. Epstein, M.D.
Professor of Preventive Medicine
Institute of Social and Preventive Medicine
University of Zürich
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HYPERTENSION DETECTION AND FOLLOW-UP PROGRAM COOPERATIVE GROUP*
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D. M. Hegsted, Ph.D.,* R. B. McGandy, M.D.,† M. L. Myers, S.M.,‡ and F. J. Stare, M.D.§
Primary Prevention of Hypertension

HYPERTENSION STUDY GROUP


Consultant: Herbert Abrams, M.D.
DIET AND SERUM CHOLESTEROL
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DAVID R. JACOBS, JR., JOSEPH T. ANDERSON AND HENRY BLACKBURN
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Factors of Risk in the Development of Coronary Heart Disease—
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The Framingham Study

WILLIAM B. KANNEL, M.D., THOMAS R. DAWBER, M.D., F.A.C.P.,
ABRAHAM KAGAN, M.D., F.A.C.P., NICHOLAS REVOTSIE, M.D.,
AND JOSEPH STOKES, III, M.D.
Framingham, Massachusetts
Coronary Heart Disease in Seven Countries

Edited by
Ancel Keys, Ph.D.
Director,
Laboratory of Physiological Hygiene,
University of Minnesota, School of Public Health,
Minneapolis, Minnesota.

THE AMERICAN HEART ASSOCIATION, INC., NEW YORK 1970
Serum Cholesterol Response to Changes in the Diet
I. Iodine Value of Dietary Fat versus 2S–P

By Ancel Keys, Joseph T. Anderson and Francisco Grande

Serum Cholesterol Response to Changes in the Diet
II. The Effect of Cholesterol in the Diet

Serum Cholesterol Response to Changes in the Diet
III. Differences Among Individuals

Serum Cholesterol Response to Changes in the Diet.
IV. Particular Saturated Fatty Acids in the Diet
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Ancel Keys
Director of the Laboratory of Physiological Hygiene and Professor in the School of Public Health, University of Minnesota
LESSONS FROM SERUM CHOLESTEROL STUDIES
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Kyushu, Japan, Akira Kusukawa, M.D., Fukuoka, Japan,
B. Bronte-Stewart, M.D., Oxford, England,
Nils Larsen, M.D., F.A.C.P., Honolulu, Hawaii,
and Margaret Haney Keys, B.Sc.,
Minneapolis, Minnesota
THE PHYSIOLOGY OF THE INDIVIDUAL AS AN APPROACH TO A MORE QUANTITATIVE BIOLOGY OF MAN

Ancel Keys

From the Laboratory of Physiological Hygiene, University of Minnesota

MINNEAPOLIS, MINNESOTA
Body Fat in Adult Man

ANCEL KEYS AND JOSEF BROŽEK

From the Laboratory of Physiological Hygiene, School of Public Health
University of Minnesota, Minneapolis, Minnesota
SEVEN COUNTRIES
Ancel Keys

with
Christ Aravanis
Henry Blackburn
Ratko Buzina
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A. S. Duntas
Flaminio Fiāanza
Martti J. Karvonen
Noboru Kimura
Alessandro Menotti
Ivan Mohaček
S. Nedeljković
Vittorio Puddu
Sven Punsar
Henry L. Taylor
F. S. P. van Buchem

A Multivariate Analysis of Death and Coronary Heart Disease

A Commonwealth Fund Book

Harvard University Press
Cambridge, Massachusetts
and London, England
1980
Coronary Heart Disease among Minnesota Business and Professional Men Followed Fifteen Years

By Ancel Keys, Ph.D., Henry Longstreet Taylor, Ph.D., Henry Blackburn, M.D., Joseph Brozek, Ph.D., Joseph T. Anderson, Ph.D., and Ernst Simonson, M.D.
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Mortality and Coronary Heart Disease Among Men Studied for 23 Years

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By Ancel Keys, Ph.D., Christ Aravanis, M.D., Henry Blackburn, M.D., F. S. P. van Buchem, M.D., Ratko Buzina, M.D., B. S. Djordjevic, M.D., Flaminio Fidanza, M.D., Martti J. Karvonen, M.D., Ph.D., Alessandro Menotti, M.D., Vittorio Puddu, M.D., and Henry L. Taylor, Ph.D.
The Biology of
HUMAN STARVATION

by

ANGEL KEYS
JOSEF BROŽEK  AUSTIN HENSCHEL
OLAF MICKELSEN
HENRY LONGSTREET TAYLOR

WITH THE ASSISTANCE OF
Ernst Simonson, Angie Sturgeon Skinner, and Samuel M. Wells

OF THE LABORATORY OF PHYSIOLOGICAL HYGIENE
SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF MINNESOTA

With Forewords by
J. C. Drummond, Russell M. Wilder, and Charles Glen King
and Robert R. Williams

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Sudden Death in Arteriosclerotic Heart Disease

The Case for Preventive Medicine

Lewis Kuller, M.D., Dr. P.H.
Baltimore, Maryland
Coronary heart disease risk factors in school children: The Muscatine study

Ronald M. Lauer, M.D.,* William E. Connor, M.D.,** Paul E. Leaverton, Ph.D.,
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II. The Relationship of Reduction in Incidence of Coronary Heart Disease to Cholesterol Lowering

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A Statistical Study of the Effect of the War-time on Arteriosclerosis, Cardiosclerosis, Tuberculosis and Diabetes

By
HAQVIN MALMROS

From the Medical Clinic, The University Hospital, Lund, Sweden
Statistical Aspects of the Analysis of Data From Retrospective Studies of Disease

NATHAN MANTEL and WILLIAM HAENSZEL, Biometry Branch, National Cancer Institute, Bethesda, Maryland

Journal of the National Cancer Institute
1959;2:719
EPIDEMIOLOGIC STUDIES OF CORONARY HEART DISEASE AND STROKE IN JAPANESE MEN LIVING IN JAPAN, HAWAII AND CALIFORNIA: PREVALENCE OF CORONARY AND HYPERTENSIVE HEART DISEASE AND ASSOCIATED RISK FACTORS¹

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W. E. MIA1L1,* M.D.; H. G. LOVEL1,* B.A., F.S.S.

THE TROMSØ HEART-STUDY
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N. E. MILLER* O. H. FORDE
D. S. THELLE O. D. MJOS

Institutes of Clinical Medicine, Community Medicine, and Medical Biology, University of Tromsø, Tromsø, Norway
CARDIOVASCULAR DISEASES IN THE UNITED STATES

IWAO M. MORIYAMA, DEAN E. KRUEGER, and JEREMIAH STAMLER

1971 / HARVARD UNIVERSITY PRESS
Cambridge, Massachusetts
CORONARY HEART-DISEASE AND
PHYSICAL ACTIVITY OF WORK

J. N. Morris
M.A. Gleng., M.R.C.P., D.P.H.
OF THE SOCIAL MEDICINE RESEARCH UNIT, MEDICAL RESEARCH COUNCIL

J. A. Heady
M.A. Oxfd.

P. A. B. Raffle
M.D. Lond., D.P.H., D.I.H.
OF THE MEDICAL DEPARTMENT, LONDON TRANSPORT EXECUTIVE

C. G. Roberts
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OF THE TREASURY MEDICAL SERVICE
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J. N. Morris S. P. W. Chave
C. Adam* C. Sirey
L. Epstein

Medical Research Council Social Medicine Unit,
Public Health Department,
London School of Hygiene and Tropical Medicine,
London WC1E 7HT

D. J. Sheehan
Medical Advisory Service to the Civil Service Department,
London
Multiple Risk Factor Intervention Trial

Risk Factor Changes and Mortality Results

Multiple Risk Factor Intervention Trial Research Group
ARTERIOSCLEROSIS

(A REPORT BY THE)
NATIONAL HEART
AND LUNG INSTITUTE-
TASK FORCE ON
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Original Contributions

PHYSICAL ACTIVITY AS AN INDEX OF HEART ATTACK RISK IN COLLEGE ALUMNI

RALPH S. Paffenbarger, Jr., ALVIN L. WING, AND ROBERT T. HYDE
CARDIOVASCULAR SURVEY METHODS

G. A. ROSE, D.M., M.R.C.P.
Department of Medical Statistics and Epidemiology,
London School of Hygiene and Tropical Medicine, London, England

H. BLACKBURN, M.D.
Laboratory of Physiological Hygiene, School of Public Health,
University of Minnesota, Minneapolis, Minn., USA

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GENEVA
1968
Sick Individuals and Sick Populations

GEOFFREY ROSE

Rosie G (Department of Epidemiology, London School of Hygiene and Tropical Medicine, Keppel Street, London WC1E 7HT, UK). Sick individuals and sick populations. International Journal of Epidemiology 1985; 14: 32–38.

Aetiology confronts two distinct issues: the determinants of individual cases, and the determinants of incidence rate. If exposure to a necessary agent is homogenous within a population, then case/control and cohort methods will fail to detect it; they will only identify markers of susceptibility. The corresponding strategies in control are the 'high-risk' approach, which seeks to protect susceptible individuals, and the population approach, which seeks to control the causes of incidence. The two approaches are not usually in competition, but the prior concern should always be to discover and control the causes of incidence.

THE DETERMINANTS OF INDIVIDUAL CASES

In teaching epidemiology to medical students, I have often encouraged them to consider a question which I first heard enunciated by Roy Acheson: 'Why did this patient get this disease at this time?'. It is an excellent starting-point, because students and doctors feel a natural concern for the problems of the individual. Indeed, the central ethos of medicine is seen as an acceptance of responsibility for sick individuals.

It is an integral part of good doctoring to ask not only, 'What is the diagnosis, and what is the treatment?' but also, 'Why did this happen, and could it have been prevented?'. Such thinking shapes the approach to nearly all clinical and laboratory research into the causes and mechanisms of illness: Hypertension research, for example, is almost wholly preoccupied with the characteristics which distinguish individuals at the hypertensive and normotensive ends of the blood pressure distribution. Research into diabetes looks for genetic, nutritional and metabolic reasons to explain why some people get diabetes and others do not. The constant aim in such work is to answer Acheson's question, 'Why did this patient get this disease at this time?'

The same concern has continued to shape the thinking of all of us who came to epidemiology from a background in clinical practice. The whole basis of the case-control method is to discover how sick and healthy individuals differ. Equally the basis of many cohort studies is the search for 'risk factors', which identify certain individuals as being more susceptible to disease; and from this we proceed to test whether these risk factors are also causes, capable of explaining why some individuals get sick while others remain healthy, and applicable as a guide to prevention.

To confine attention in this way to within-population comparisons has caused much confusion (particularly in the clinical world) in the definition of normality. Laboratory 'ranges of normal' are based on what is common within the local population. Individuals with 'normal blood pressure' are those who do not stand out from their local contemporaries; and so on. What is common is all right, we presume.

Applied to aetiology, the individual-centred approach leads to the use of relative risk as the basic representation of aetiological force: that is, 'the risk in exposed individuals relative to risk in non-exposed individuals'. Indeed, the concept of relative risk has almost excluded any other approach to quantifying causal importance. It may generally be the best measure of aetiological force, but it is no measure at all of aetiological outcome or of public health importance.

Unfortunately this approach to the search for causes, and the measuring of their potency, has to assume a heterogeneity of exposure within the study population. If everyone smoked 20 cigarettes a day, then clinical, case-control and cohort studies alike would lead us to conclude that lung cancer was a genetic disease; and in one sense that would be true, since if everyone is exposed to the necessary agent, then the distribution of cases is wholly determined by individual susceptibility.

Within Scotland and other mountainous parts of Britain (Figure 1, left section) there is no discernible relation between local cardiovascular death rates and the softness of the public water supply. The reason is apparent if one extends the enquiry to the whole of the
Coronary Heart Disease in the Western Collaborative Group Study
Final Follow-up Experience of 8½ Years

Ray H. Rosenman, MD; Richard J. Brand, PhD; C. David Jenkins, PhD;
Meyer Friedman, MD; Reuben Straus, MD; Moses Wurm, MD
Multivariate Prediction of Coronary Heart Disease During 8.5 Year Follow-Up in the Western Collaborative Group Study

RAY H. ROSENMAN, MD, FACC*
RICHARD J. BRAND, PhD†
ROBERT I. SHOLTZ, MS°
MEYER FRIEDMAN, MD°

San Francisco and Berkeley, California
Chinese Lessons to Western Medicine - A Contribution to Geographical Medicine from the Clinics of Peiping Union Medical College by I. Snapper

Professor and Head of the Dept. of Medicine, Peiping Union Medical College, Peiping, China. With a Foreword by George R. Minot, Professor of Medicine, Harvard University.

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Lectures on

PREVENTIVE CARDIOLOGY

By JEREMIAH STAMLER, M.D.

Director, Heart Disease Control Program
and Division of Adult Health and Aging, Chicago Board of Health;
Executive Director, Chicago Health Research Foundation;
Associate Professor, Department of Medicine,
Northwestern University Medical School;
Consultant in Medicine, Presbyterian-St. Luke's Hospital;
Consultant in Medicine, St. Joseph Hospital, Chicago, Illinois;
Western Hemisphere Editor, Journal of Atherosclerosis Research.
A MULTIVARIATE ANALYSIS OF THE RISK OF CORONARY HEART DISEASE IN FRAMINGHAM

JEANNE TRUETT*, JEROME CORNFIELD† and WILLIAM KANNEL, M.D.‡

National Heart Institute, National Institutes of Health, Bethesda, Maryland

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U.S. Department of Agriculture
U.S. Department of Health, Education and Welfare
Estimation of the probability of an event as a function of several independent variables

BY STROTHER H. WALKER† AND DAVID B. DUNCAN

Johns Hopkins University
This report contains the collective views of an international group of experts and does not necessarily represent the decisions or the stated policy of the World Health Organization.

Prevention of coronary heart disease

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World Health Organization, Geneva 1982
Community control of cardiovascular diseases

Evaluation of a comprehensive community programme for control of cardiovascular diseases in North Karelia, Finland 1972–1977

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PLASMA LIPIDS:
OPTIMAL LEVELS FOR HEALTH

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ERNST L. WYNDER
Conference Chairman

HENRY BLACKBURN
BARRY LEWIS
ROBERT WISSLER
Workshop Chairmen

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