

Health Practices that Lengthen Life Expectancy among Seventh Day Adventists: the Confusion for Public Health

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Seventh Day Adventists

- The **Seventh-day Adventist Church** is a Protestant Christian denomination distinguished by its observance of Saturday, the original seventh day of the Judeo-Christian week, as the Sabbath, and by its emphasis on the imminent second coming (advent) of Jesus Christ. The denomination grew out of the Millerite movement in the United States during the middle part of the 19th century and was formally established in 1863. Among its founders was Ellen G. White, whose extensive writings are still held in high regard by the church today.



Longevity among Seventh Day Adventists

- The health principles from Ellen G. White's writings contributed to give rise to one of the longest living people groups in the world – The Seventh - day Adventists.
- The health and longevity of the Adventists has attracted the interest of many public health specialists, who incidentally tend to focus more on the dietary and psychosocial determinants of the Adventist lifestyle, rather than the source from where the knowledge about health preservation among the Adventists arise.

The Secrets of Long Life

Published: November 2005

Longevity, The Secrets of

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Unlock the secrets of longevity.

INTERACTIVE EXPEDITION



Cast your vote and direct our longevity quest in

The Secrets of Long Life



By Dan Buettner

Photographs by David McLain

Residents of Okinawa, Sardinia, and Loma Linda, California, live longer, healthier lives than just about anyone else on Earth. What do they know that the rest of us don't?

Get a taste of what awaits you in print from this compelling excerpt.

What if I said you could add up to ten years to your life? A long healthy life is no accident. It begins with good genes, but it also depends on good habits. If you adopt the right lifestyle, experts say, chances are you may live up to a decade longer. So what's the formula for success? In recent years researchers have focused not on the state to find the secrets to long

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Ten Years of Life

Is It a Matter of Choice?

Gary E. Fraser, MB, ChB, PhD; David J. Shavlik, MSPH

Conclusions: Choices regarding diet, exercise, cigarette smoking, body weight, and hormone replacement therapy, in combination, appear to change life expectancy by many years. The longevity experience of Adventists probably demonstrates the beneficial effects of more optimal behaviors.

Arch Intern Med. 2001;161:1643-1652

Figure 1. Survival of California Adventist men (1980-1988) and other California men (1985) beyond the age of 30 years. The difference between the 2 groups was significant ($P<.001$). These were non-Hispanic white subjects. Hazards for 1989 are used for non-Adventist Californians older than 94 years (see the "Subjects and Methods" section of the text). AHS indicates Adventist Health Study; CI, confidence interval.

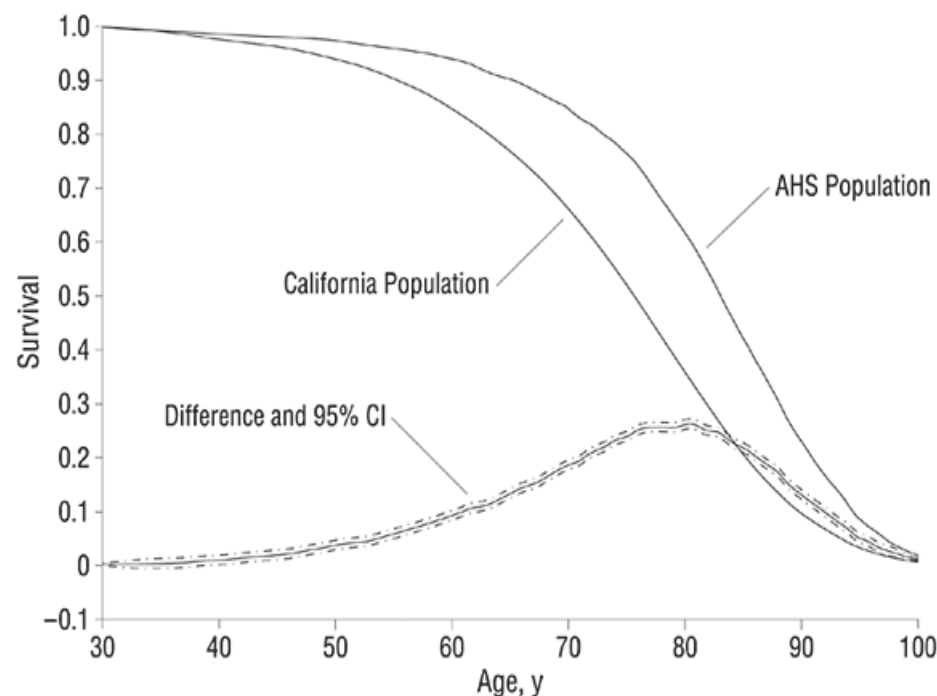
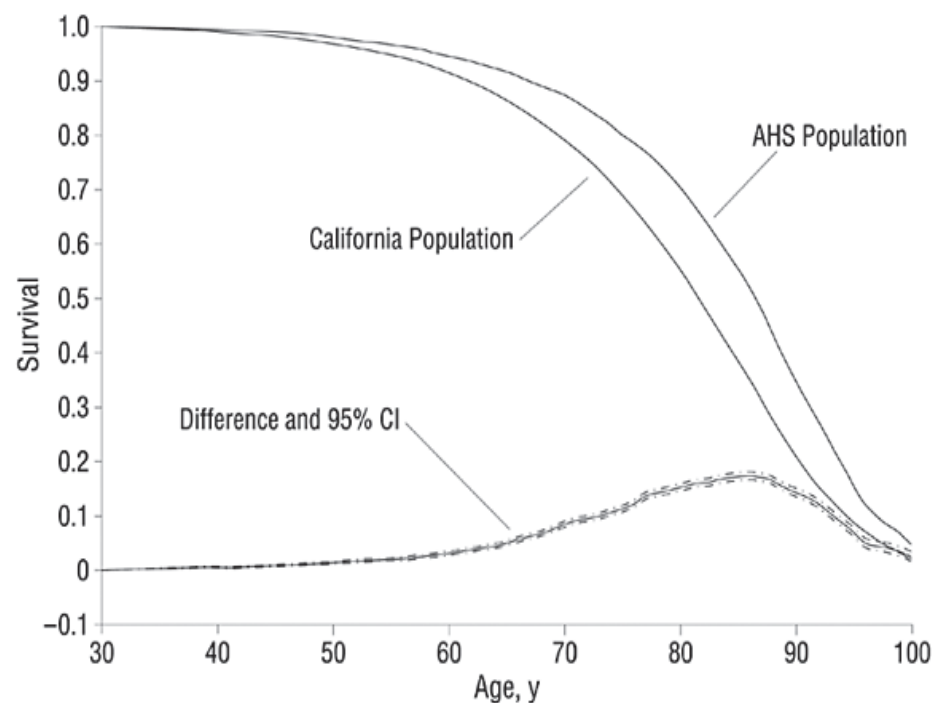


Figure 2. Survival of California Adventist women (1980-1988) and other California women (1985) beyond the age of 30 years. The difference between the 2 groups was significant ($P<.001$). These were non-Hispanic white subjects. Hazards for 1989 are used for non-Adventist Californians older than 94 years (see the "Subjects and Methods" section of the text). AHS indicates Adventist Health Study; CI, confidence interval.

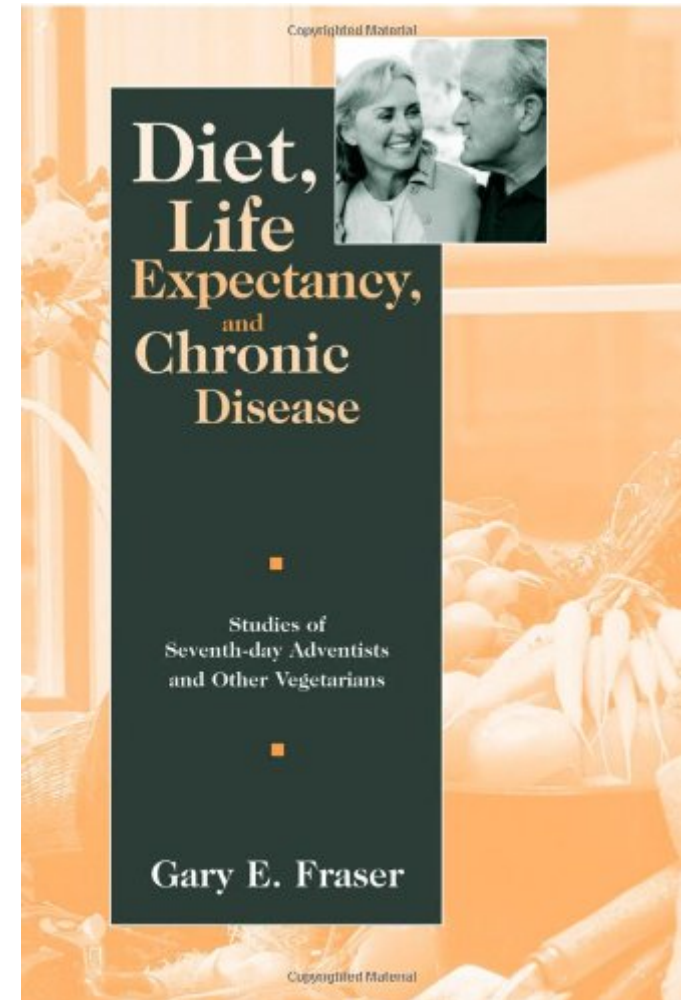


Aim

- The principles of health stated by Ellen G. White will be reviewed with respect to their accordancy with modern science and proven beneficial health effects when practiced

Health principles

- “Grains, fruits, nuts, and vegetables constitute the diet chosen for us by our Creator,” wrote Ellen White
- SDA do not smoke
- They avoid alcohol
- They exercise
- The role of rest and sabbath
- The role of social support
- Psychological role of hope and prayer



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Choices

Exercise

Liquids

Environment

Belief

Rest

Air

Temperance

Integrity

Optimism

Nutrition

Social Support
& Service

Health Ministries
General Conferen

It is not only about diet

- The principles of health Ellen G. White advocates are in accordance with modern thinking about healthy lifestyle
- Evidence from epidemiological studies confirms most of her postulates
- The embarrassing postulated prophetic inspiration for knowledge on health principles

Ellen G. White

- **Ellen Gould White** (*born Harmon*) (November 26, 1827 – July 16, 1915) was a prolific author and an American Christian pioneer. She, along with other Sabbatarian Adventist leaders, such as Joseph Bates and her husband James White, formed what is now known as the Seventh-day Adventist Church.
- "spirit of prophecy"



Source: Wikipedia

Ellen G. White and her visions

- At the age of nine, Ellen was struck with a rock thrown by a jealous student. The injury severely disfigured her nose, and left her in a coma for several weeks.
- „The Holy Ghost fell upon me and I seemed to be rising higher and higher, far above the dark world. I turned to look for the Advent people in the world but I could not find them, when a voice said to me, „Look a little higher“. At this I raised my eyes and saw a straight and narrow path, cast up high above the world. On this path the advent people were travelling to the city which was at the farther end of the path...”



Source: Rene Noorbergen. Ellen G. White – Prophet of Destiny. Teach Services. New York 2001.

Health visions

- The beginnings of health ministry are found in a vision that White had in 1863. The vision was said to have occurred during a visit by James and Ellen White to Otsego, Michigan to encourage the evangelistic workers there. As the group bowed in prayer at the beginning of Sabbath, Ellen White reportedly had a vision of the relation of physical health to spirituality, of the importance of following right principles in diet and in the care of the body, and of the benefits of nature's remedies—clean air, sunshine, exercise and pure water.

Did Ellen White „borrow” her message from other health reformers?

Table 5.1. Health Principles (“Whats”) in *Spiritual Gifts*
(categorized as to correctness and significance)

A. Verified and significant “whats”

<u>Avoid:</u>	<u>Restrict:</u>	Exercise
Drugs	Salt	Vegetable foods
Patent medicines	Butter	Whole-wheat flour
Secondhand tobacco		Variety of food
smoke	<u>Moderate:</u>	Clean water
Smoking	Milk	Plenty of water
Alcohol	Outdoors	Clean person
Hard drugs		Clean house
Meat	<u>Daily and freely:</u>	Clean clothes
Animal fat	Good lifestyle	Sanitation
Overeating	Ventilation	Trust in God
Idleness	Clean environment	Cheerfulness
	Sunlight	Willpower
	Recreation	

B. Verified and minor “whats”

<u>Avoid:</u>	<u>When needed:</u>	<u>Daily and freely:</u>
Hypnotism	Fasting	Simple foods
Phrenology	Adjust diet slowly	Soft water
Tea and coffee	Hydrotherapy	
Pig meat		
Spices		
Sleep after eating		
Wet house-building site		

C. Unverified “whats”

<u>Avoid:</u>	<u>Usually:</u>
Leaven in bread	Only two meals a day

Table 5.2. Unverified “Whats” From Other Health Reformers
(health advice that’s contrary to modern science)

Sylvester Graham:

Don’t heat your house
Go naked
Don’t shave
Don’t cut your hair
Don’t use perfumes
Avoid strong odors—even pleasant ones, like the scent of flowers
Don’t rock a baby to sleep
Don’t use salt
If you must eat meat, eat it raw
Don’t drink water—get your liquids only from fruit
Avoid activities that cause you to perspire

William A. Alcott:

Venesection (bleeding) has validity—e.g., for heart disease
Wear very little clothing, even when it’s cold
Avoid excessive application of your mind
Reading light literature injures your health
Don’t use eye glasses
Children shouldn’t drop their voices in the midst of a sentence
Don’t comfort children; crying is good for them
Don’t protect your face or neck from subzero air
Avoid sweating in hot weather
Keep no plants in your bedroom
Don’t nap during the day
Don’t sleep in the same bed with someone else
Avoid excess pleasure or mental activity
Don’t eat most vegetables other than potatoes
When eating meat, eat mostly the fat
Don’t let children eat fruit
Overweight people are healthy people
Avoid eating breakfast

Did Ellen White „borrow” her message from other health reformers?

You needn't drink much; food provides nearly all the liquid you need

Wear coarse, rough clothing; it cleans the skin and reduces the need for bathing

Don't bathe early in the day

Larkin B. Coles:

Know your own phrenology

Avoid excessive spitting

Don't rock a child in a cradle

Don't eat cucumbers or some other vegetables

Don't talk while eating

Don't nurse babies at night

Avoid mental activity for an hour after eating

Sugar is good food

If you exercise, reduce the amount you eat

Drink little water

Bathe, preferably, in seawater

You needn't bathe more than once or twice a week

James C. Jackson:

A good lifestyle eliminates the need for vaccination

Don't wear black

Wear your hair long enough to cover your neck (advice for both sexes)

Marital sexual activity is dangerous to health

Phrenology is scientific

Children should avoid eating potatoes

You can live exclusively on bread

The best diet consists of grains and fruits alone

Don't eat salt

Rubbing the body with the hands will substitute for a bath

Bathe at midday

Don't use soap

John H. Kellogg:

Don't indulge in sex more than once per month

Women younger than 20 and men younger than 25 shouldn't have sex

Women past menopause and men older than 50 shouldn't have sex

Surgical circumcision performed before puberty will increase a girl's health

Don't squint or roll your eyes

Wear flannel neck-to-ankle underclothes year-round

Avoid developing your muscles

Bathe at 10 or 11 AM

Don't bathe when you're sweating

Table 5.3. Unverified “Whats” in *The Ministry of Healing* (these don't appear in *Spiritual Gifts*)

Avoid eating both fruits and vegetables at any one meal

Cheese is more objectionable than butter; it is wholly unfit for food

Don't eat blood

Don't eat very hot or cold food (food should be lukewarm)

Don't allow waste vegetables or heaps of fallen leaves to remain near one's house

Don't engage in intense study immediately after eating

Don't engage in violent or excessive exercise immediately before or after eating*

Don't eat when one is excited, anxious, or hurried*

The more liquid you take with a meal, the more difficulty you'll have digesting the food*

*These items do slow digestion, but I don't consider them to be health hazards.

What to avoid

- Drugs, patent medicines
- Secondhand tobacco smoke
- Smoking
- Alcohol
- Hard drugs
- Meat, animal fat
- Overeating
- Idleness

Daily and freely

- Good lifestyle
- Ventilation
- Clean environment
- Sunlight
- Recreation
- Exercise
- Vegetable foods
- Whole-wheat flour
- Variety of food
- Clean water
- Variety of food
- Clean water
- Plenty of water
- Clean person
- Clean house
- Clean clothes
- Sanitation
- Trust in God
- Cheerfulness
- Willpower

Drugs

Antioxidant supplements for prevention of mortality in healthy participants and patients with various diseases (Review)

Bjelakovic G, Nikolova D, Gluud LL, Simonetti RG, Gluud C



Authors' conclusions

We found no evidence to support antioxidant supplements for primary or secondary prevention. Vitamin A, beta-carotene, and vitamin E may increase mortality. Future randomised trials could evaluate the potential effects of vitamin C and selenium for primary and secondary prevention. Such trials should be closely monitored for potential harmful effects. Antioxidant supplements need to be considered medicinal products and should undergo sufficient evaluation before marketing.

Passive smoking

The New England Journal of Medicine

nonsmoking women, we conducted a population-based, case-control study.

Methods. Case patients

PASSIVE SMOKING AND THE RISK OF CORONARY HEART DISEASE — A META-ANALYSIS OF EPIDEMIOLOGIC STUDIES

JIANG HE, M.D., PH.D., SUMA VUPPUTURI, M.P.H., KRISTA ALLEN, M.P.H., MONICA R. PREROST, M.S.,
JANET HUGHES, PH.D., AND PAUL K. WHELTON, M.D.

ABSTRACT

Background The effect of passive smoking on the risk of coronary heart disease is controversial. We conducted a meta-analysis of the risk of coronary heart disease associated with passive smoking among nonsmokers.

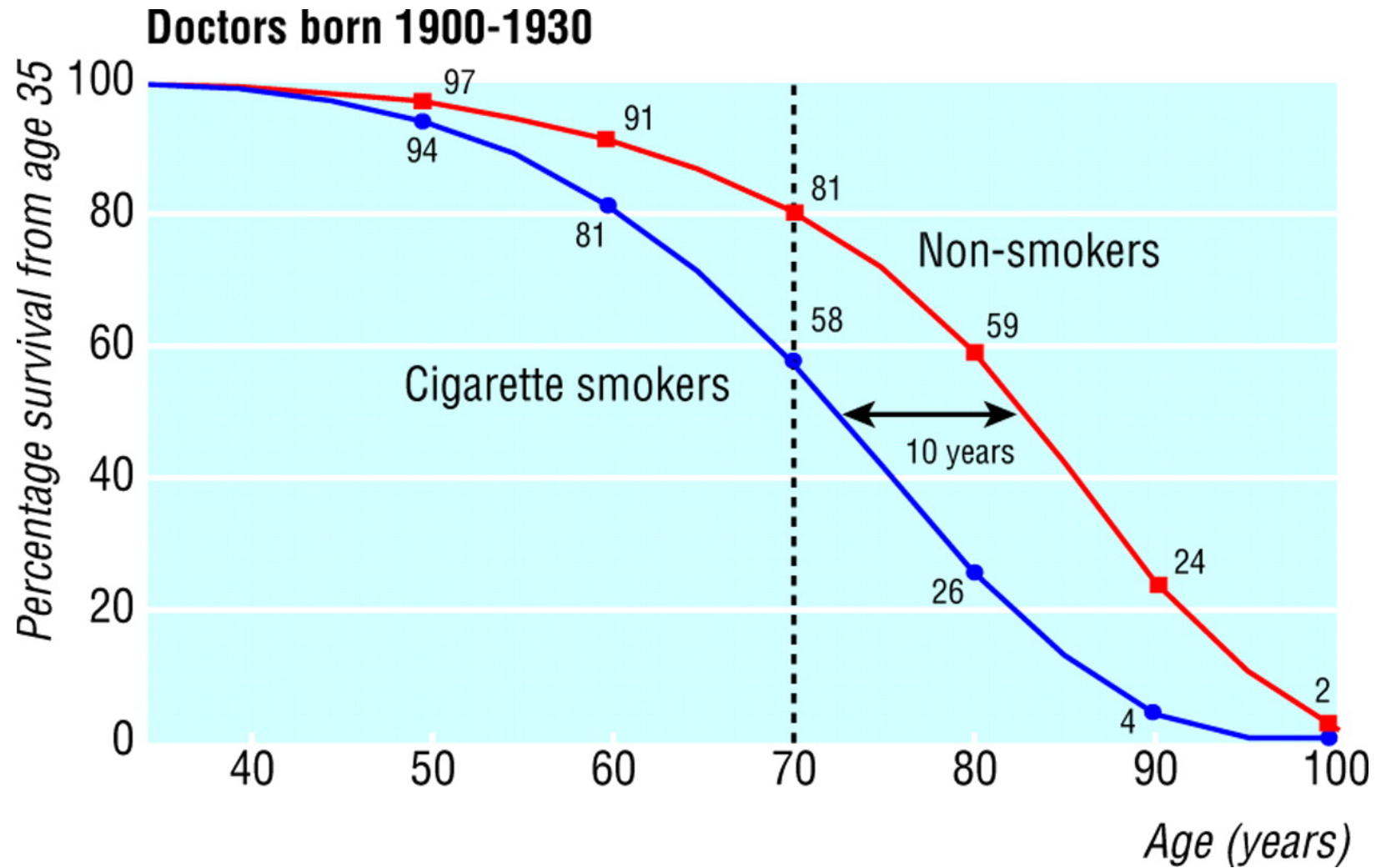
Methods We searched the Medline and Dissertation Abstracts Online data bases and reviewed citations in relevant articles to identify 18 epidemiologic (10 cohort and 8 case-control) studies that met pre-stated inclusion criteria. Information on the designs of the studies, the characteristics of the study subjects, exposure and outcome measures, control for potential confounding factors, and risk estimates was abstracted independently by three investigators using a standardized protocol.

Results Overall, nonsmokers exposed to environmental smoke had a relative risk of coronary heart disease of 1.25 (95 percent confidence interval, 1.17 to 1.32) as compared with nonsmokers not exposed to smoke. Passive smoking was consistently associated with an increased relative risk of coronary heart disease in cohort studies (relative risk, 1.21; 95 per-

CORONARY heart disease is the leading cause of death in the United States and other industrialized countries. In 1995, an estimated 481,287 deaths in the United States resulted from coronary heart disease, representing more than 1 of every 5 deaths.¹ In many developing countries, mortality from coronary heart disease has increased rapidly and the disease has become the leading cause of death.²

Active cigarette smoking is one of the most important modifiable risk factors for coronary heart disease.³⁻⁵ In the United States, active cigarette smoking results in approximately 100,000 deaths due to coronary heart disease each year.⁶ Many epidemiologic studies⁷⁻²⁵ and reviews²⁶⁻³² have pointed to the effect of passive smoking on the risk of coronary heart disease. Even so, the extent of the association between passive smoking and coronary heart disease is not fully known. Therefore, we assessed the relation between passive smoking and the risk of coronary heart disease among nonsmokers.

British Doctors Study (1951 – 1954)



Doll R et al. Mortality in relation to smoking: 50 years' observations on male British doctors BMJ 2004;328:1519

BMJ

Alcohol

Moderate Alcohol Use and C

Mendelian Randomization

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BMJ 2014;349:g4164 doi: 10.1136/bmj.g4164 (Published 10 July 2014)

Association between alcohol disease: Mendelian random individual participant data



OPEN ACCESS

Abstract

Objective To use the rs1229984 variant in the alcohol dehydrogenase 1B gene (*ADH1B*) as an instrument to investigate the causal role of alcohol in cardiovascular disease.

Design Mendelian randomisation meta-analysis of 56 epidemiological studies.

Participants 261 991 individuals of European descent, including 20 259 coronary heart disease cases and 10 164 stroke events. Data were available on *ADH1B* rs1229984 variant, alcohol phenotypes, and cardiovascular biomarkers.

Main outcome measures Odds ratio for coronary heart disease and stroke associated with the *ADH1B* variant in all individuals and by categories of alcohol consumption.

Results Carriers of the A-allele of *ADH1B* rs1229984 consumed 17.2% fewer units of alcohol per week (95% confidence interval 15.6% to 18.9%), had a lower prevalence of binge drinking (odds ratio 0.78 (95% CI 0.73 to 0.84)), and had higher abstinence (odds ratio 1.27 (1.21 to 1.34)) than non-carriers. Rs1229984 A-allele carriers had lower systolic blood pressure (−0.88 (−1.19 to −0.56) mm Hg), interleukin-6 levels (−5.2% (−7.8 to −2.4%)), waist circumference (−0.3 (−0.6 to −0.1) cm), and body mass index (−0.17 (−0.24 to −0.10) kg/m²). Rs1229984 A-allele carriers had lower odds of coronary heart disease (odds ratio 0.90 (0.84 to 0.96)). The protective association of the *ADH1B* rs1229984 A-allele variant remained the same across all categories of alcohol consumption (*P*=0.83 for heterogeneity). Although no association of rs1229984 was identified with the combined subtypes of stroke, carriers of the A-allele had lower odds of ischaemic stroke (odds ratio 0.83 (0.72 to 0.95)).

Conclusions Individuals with a genetic variant associated with non-drinking and lower alcohol consumption had a more favourable cardiovascular profile and a reduced risk of coronary heart disease than those without the genetic variant. This suggests that reduction of alcohol consumption, even for light to moderate drinkers, is beneficial for cardiovascular health.

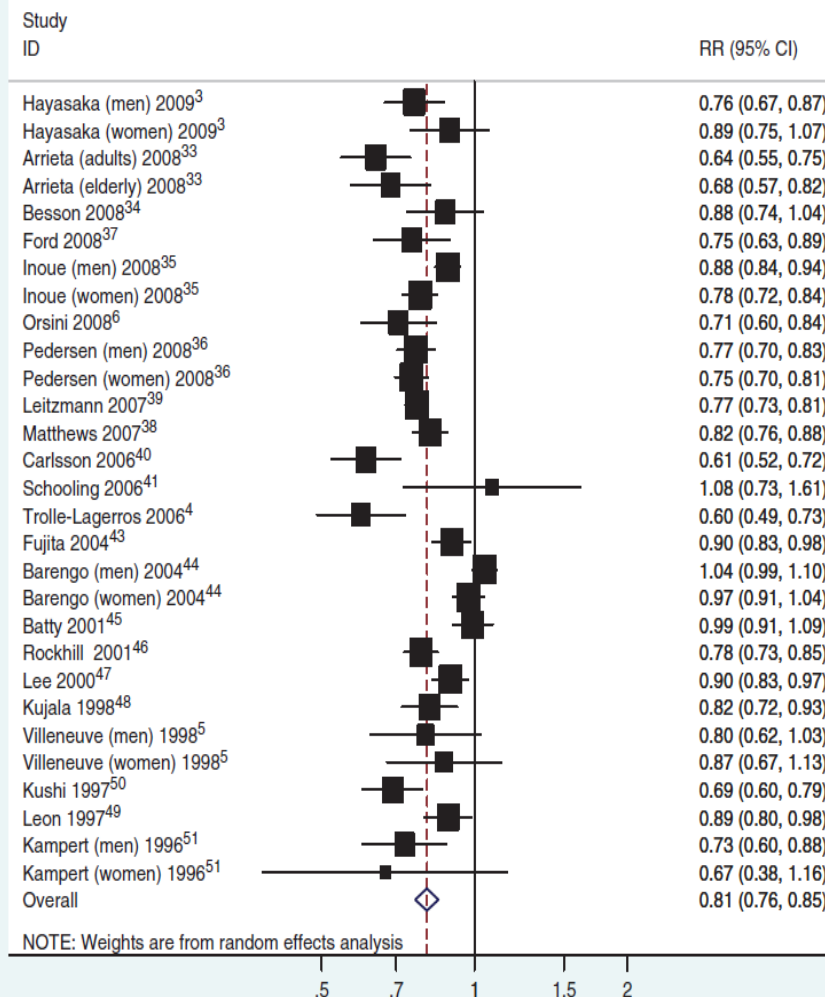
Physical activity

Non-vigorous physical activity and all-cause mortality: systematic review and meta-analysis of cohort studies

James Woodcock,^{1*} Oscar H Franco,^{2,3} Nicola Orsini⁴ and Ian Roberts¹

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Accepted 12 May 2010

Background Although previous studies have found physical activity to be associated with lower mortality, the dose-response relationship remains unclear. In this systematic review and meta-analysis we quantify the dose-response relationship of non-vigorous physical activity and all-cause mortality.

Methods We aimed to include all cohort studies in adult populations with a sample size of more than 10 000 participants that estimated the effect of different levels of light or moderate physical activity on all-cause mortality. We searched Medline, Embase, Cochrane (DARE), Web of Science and Global Health (June 2009). We used dose-response meta-regression models to estimate the relation between non-vigorous physical activity and mortality.

Results We identified 22 studies that met our inclusion criteria, containing 977 925 (334 738 men and 643 187 women) people. There was considerable variation between the studies in their categorization of physical activity and adjustment for potential confounders. We found that 2.5 h/week (equivalent to 30 min daily of moderate intensity activity on 5 days a week) compared with no activity was associated with a reduction in mortality risk of 19% [95% confidence interval (CI) 15–24], while 7 h/week of moderate activity compared with no activity reduced the mortality risk by 24% (95% CI 19–29). We found a smaller effect in studies that looked at walking alone.

Conclusion Being physically active reduces the risk of all-cause mortality. The largest benefit was found from moving from no activity to low levels of activity, but even at high levels of activity benefits accrue from additional activity.

Keywords Physical activity, exercise, walking, mortality, systematic review, meta-analysis, cohort study, dose-response

Idleness - Bored to death (sitting)

- Boredom levels were reported in the later versions of the baseline questionnaire (1985–88) of the Whitehall II cohort study.
- Follow-up for total mortality was available up to the end of April 2009. Excluding those with prevalent cardiovascular disease (CVD) at baseline, gave a sample size of 7524 men and women. The study found that those with a great deal of boredom were more likely to die during follow-up than those not bored at all (Table 2). In particular, they were more likely to die from a CVD fatal event [hazard ratio (HR) 2.53; confidence interval (CI) 1.23–5.21].



- Time spent sitting and physical activity were queried by questionnaire on 53,440 men and 69,776 women who were disease free at enrollment. The authors identified 11,307 deaths in men and 7,923 deaths in women during the 14-year follow-up. After adjustment for smoking, body mass index, and other factors, time spent sitting (≥ 6 vs. <3 hours/day) was associated with mortality in both women (relative risk = 1.34, 95% confidence interval (CI): 1.25, 1.44) and men (relative risk = 1.17, 95% CI: 1.11, 1.24).

Britton A, Shipley MJ. Bored to death? *Int J Epidemiol*. 2010 Apr;39(2):370-1.

Patel AV, Bernstein L, Deka A, Feigelson HS i wsp. Leisure time spent sitting in relation to total mortality in a prospective cohort of US adults. *Am J Epidemiol*. 2010 Aug 15;172(4):419-2.

Health and **ways of living** – Alameda County study

- In 1965 in an attempt to assess the effects of health habits and social relationships on physical and mental health, Belloc and colleagues obtained information from 6,928 respondents in Alameda county. The probability sample included 3,158 men and 3,770 women. This sample would become known as the 1965 Alameda cohort. Each participant answered surveys regarding marital and life satisfaction, parenting, physical activities, employment, childhood experiences, and demographic data.
- Findings:
 - Avoiding smoking
 - Exercising regularly
 - Maintaining a healthy body weight
 - Sleeping seven to eight hours per night.
 - Limiting consumption of alcoholic drinks
 - No eating between meals
 - Eating breakfasts

Berkman, L.F., Breslow, L. Health and Ways of Living: The Alameda County Study. New York: Oxford University Press, 1983

Meat, animal fat: data from AHS-2

Characteristic	Deaths, Hazard Ratio (95% CI)				
	All-Cause	Ischemic Heart Disease	Cardiovascular Disease	Cancer	Other
All (N = 73 308), No. of deaths ^{a,b}	2560	372	987	706	867
Vegetarian					
Vegan	0.85 (0.73-1.01)	0.90 (0.60-1.33)	0.91 (0.71-1.16)	0.92 (0.68-1.24)	0.74 (0.56-0.99)
Lacto-ovo	0.91 (0.82-1.00)	0.82 (0.62-1.06)	0.90 (0.76-1.06)	0.90 (0.75-1.09)	0.91 (0.77-1.07)
Pesco	0.81 (0.69-0.94)	0.65 (0.43-0.97)	0.80 (0.62-1.03)	0.94 (0.72-1.22)	0.71 (0.54-0.94)
Semi	0.92 (0.75-1.13)	0.92 (0.57-1.51)	0.85 (0.63-1.16)	0.94 (0.66-1.35)	0.99 (0.72-1.36)
Nonvegetarian	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Men (n = 25 105), No. of deaths ^a	1031	169	390	273	368
Vegetarian					
Vegan	0.72 (0.56-0.92)	0.45 (0.21-0.94)	0.58 (0.38-0.89)	0.81 (0.48-1.36)	0.81 (0.53-1.22)
Lacto-ovo	0.86 (0.74-1.01)	0.76 (0.52-1.12)	0.77 (0.59-0.99)	1.01 (0.75-1.37)	0.89 (0.69-1.15)
Pesco	0.73 (0.57-0.93)	0.77 (0.45-1.30)	0.66 (0.44-0.98)	1.10 (0.73-1.67)	0.60 (0.39-0.93)
Semi	0.93 (0.68-1.26)	0.73 (0.33-1.60)	0.75 (0.43-1.32)	1.15 (0.65-2.03)	1.03 (0.62-1.71)
Nonvegetarian	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Women (n = 48 203), No. of deaths ^{a,c}	1529	203	597	433	499
Vegetarian					
Vegan	0.97 (0.78-1.20)	1.39 (0.87-2.24)	1.18 (0.88-1.60)	0.99 (0.69-1.44)	0.70 (0.47-1.05)
Lacto-ovo	0.94 (0.83-1.07)	0.85 (0.59-1.22)	0.99 (0.81-1.22)	0.85 (0.67-1.09)	0.93 (0.75-1.17)
Pesco	0.88 (0.72-1.07)	0.51 (0.26-0.99)	0.90 (0.66-1.23)	0.86 (0.61-1.21)	0.81 (0.58-1.15)
Semi	0.92 (0.70-1.22)	1.09 (0.60-1.98)	0.93 (0.64-1.34)	0.85 (0.56-1.30)	0.97 (0.64-1.47)
Nonvegetarian	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]

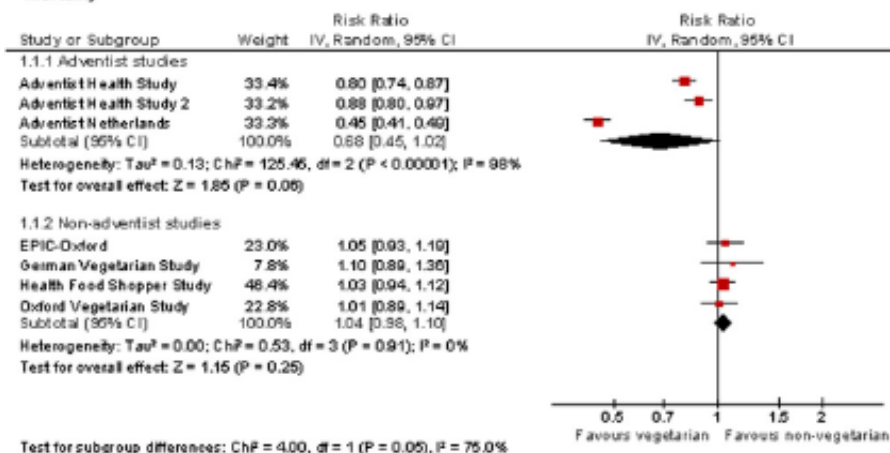
^a Adjusted by age (ie, attained age as time variable), race (black, nonblack), smoking (current smoker, quit <1 year, quit 1-4 years, quit 5-9 years, quit 10-19 years, quit 20-29 years, quit ≥30 years, and never smoked), exercise (none, ≤20 min/week, 21-60 min/week, 61-150 min/week, and ≥151 min/week), personal income (≤\$20 000/y, >\$20 000-\$50 000/y, >\$50 000-\$100 000/y, and >\$100 000/y), educational level (up to high school graduate, trade school/some college/associate degree, bachelor degree, and graduate degree), marital status (married/common-law and single/widowed/divorced/separated), alcohol (nondrinker, rare drinker [<1.5 servings/mo], monthly drinker [1.5 to <4 servings/mo], weekly drinker [4 to <28 servings/mo], and daily drinker [≥28 servings/mo]), region (West,

Northwest, Mountain, Midwest, East, and South), and sleep (≤4 h/night, 5-8 h/night, and ≥9 h/night).

^b Also adjusted by sex (male and female), menopause (in women) (premenopausal [including perimenopausal], postmenopausal), and hormone therapy (in postmenopausal women) (not taking hormone therapy, taking hormone therapy).

^c Also adjusted by menopause (premenopausal [including perimenopausal], postmenopausal) and hormone therapy (postmenopausal women) (not taking hormone therapy, taking hormone therapy).

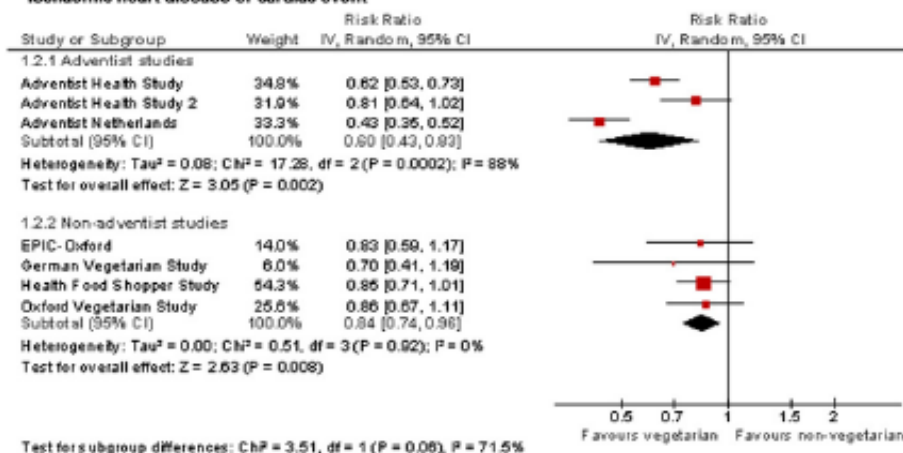
Mortality



There is substantial heterogeneity among studies on vegetarian diet and mortality.

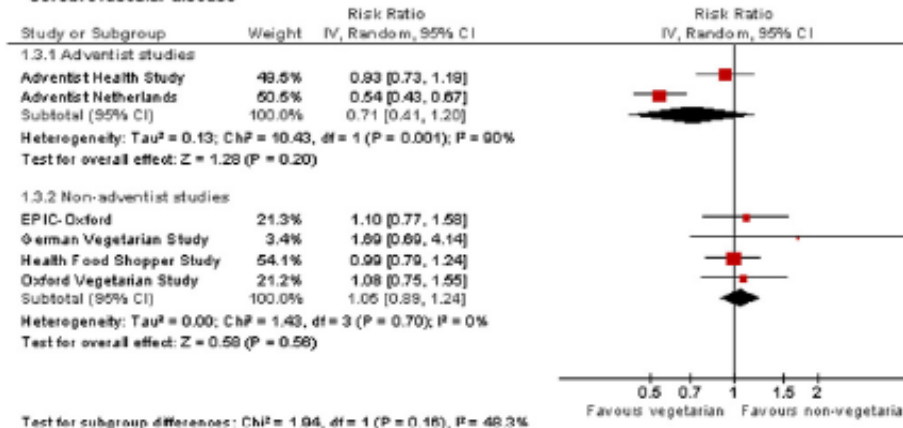
Are Adventists different from other vegetarians?

Ischaemic heart disease or cardiac event



Differences in the food content of vegetarian diets beyond the absence of meat (grains, nuts)?

Cerebrovascular disease



Confounding resulted from differences in psychosocial profiles?

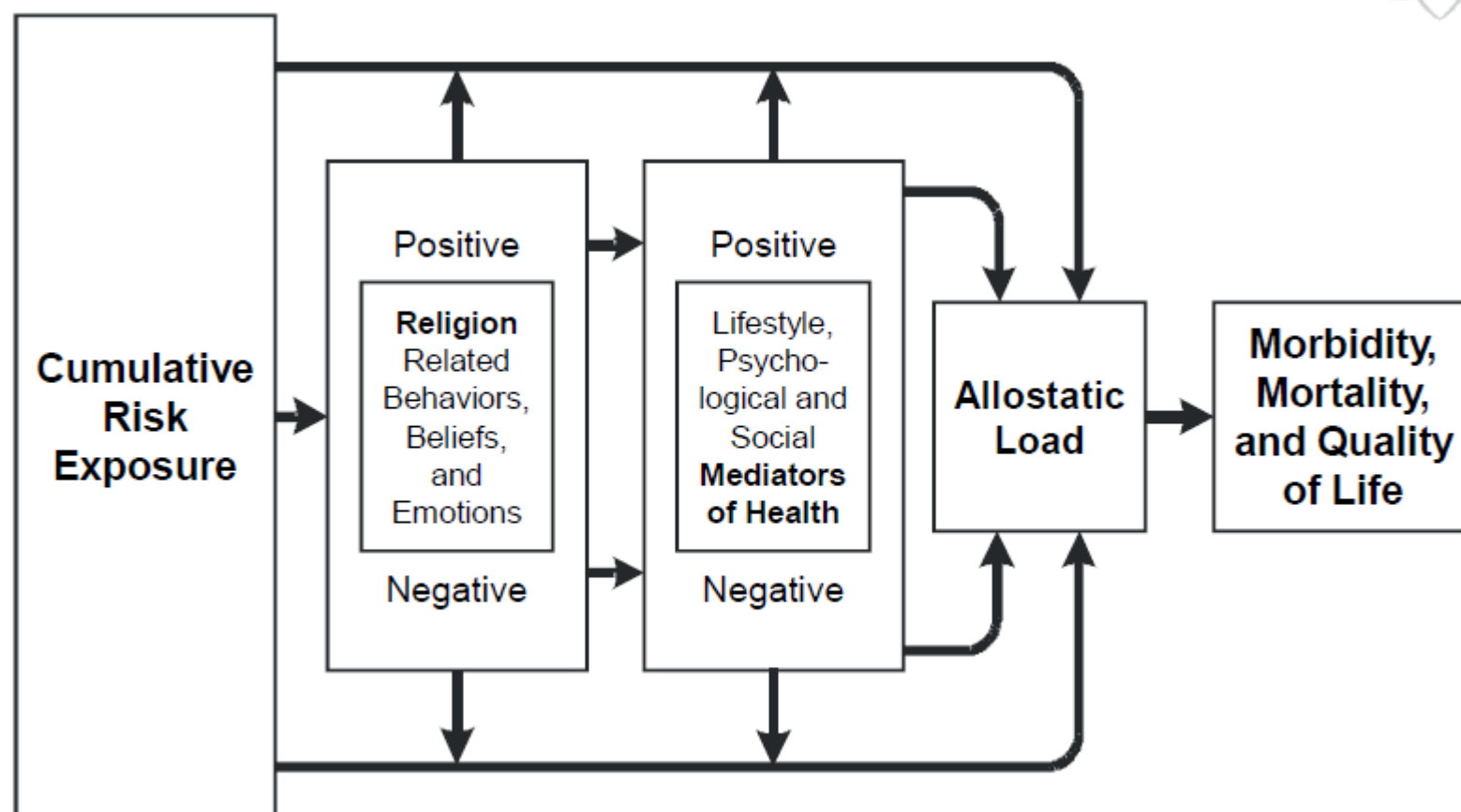
What is proper paradigm?

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International Journal of Epidemiology 2009;38:1470–1478
doi:10.1093/ije/dyn244

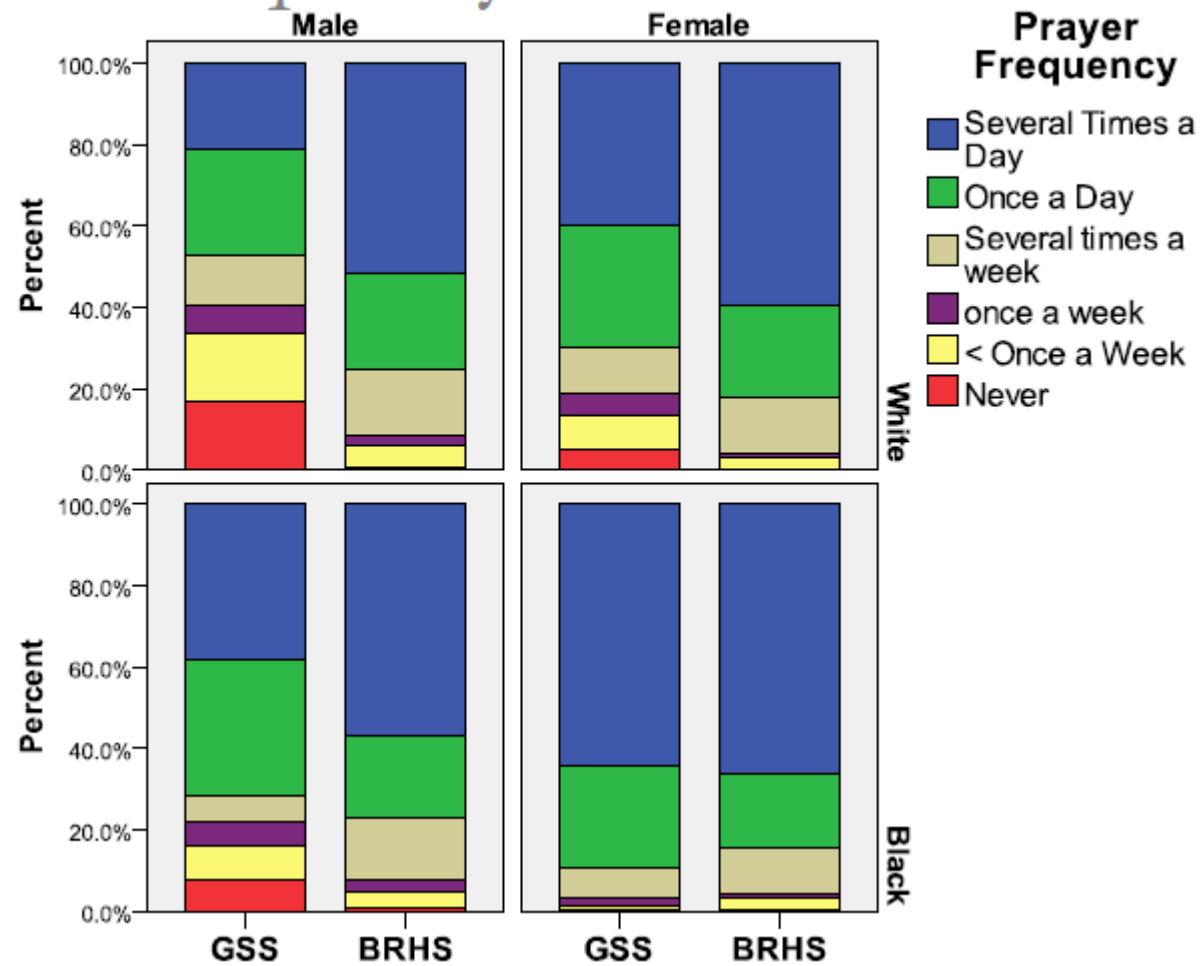
COHORT PROFILE

Cohort Profile: The biopsychosocial religion and health study (BRHS)

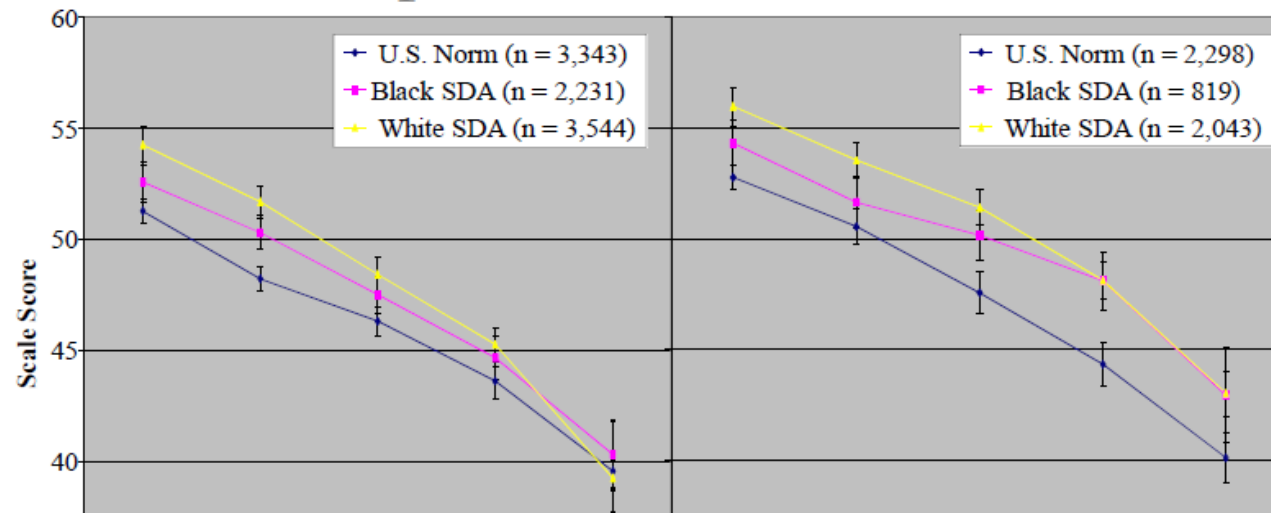


longevity.⁵

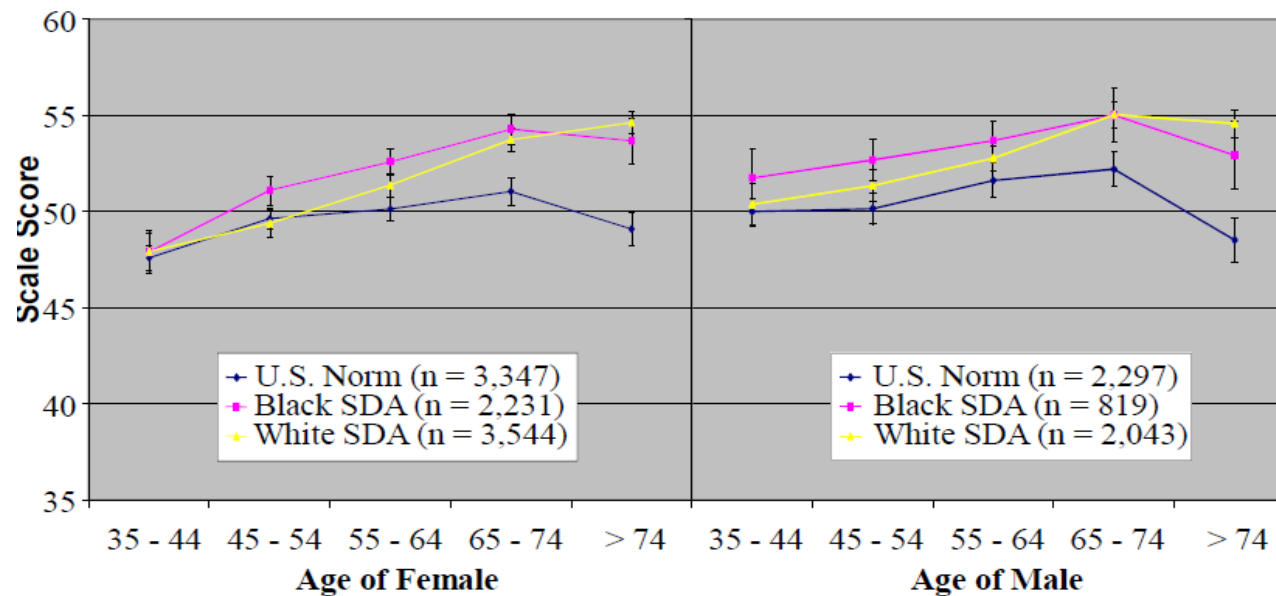
Prayer Frequency



Composite Physical Health (SF-12) Self Report



Composite Mental Health (SF-12) Self-Report



Confusion for public health

- „In the search for causes of health and disease, starting with the discovery of groups with high- and low-rates, studying these differences in relation to differences in **ways of living**; and, where possible, testing these notions in actual practice among populations.”
- Should epidemiologist recommend to become SDA?
- Which practices are health protective? Are they religion specific?
- Which religious beliefs are best for health?
- Is it combined effect of beliefs and behaviours?
- Perplexity for researchers and health policy makers

Conclusion

There is a need for a better understanding of the pathways by which religion might influence health in Adventists.

Many health behaviors present among Adventists are already established as elements of *healthy* lifestyles and are promoted by public health practitioners.

There is no sufficient data to determine whether the longevity of Adventists is the result of combined manifestation of beliefs and behaviors or this is the result of specific behaviors only.

