

# Research on Seventh-day Adventists and Health

For years health educators have promoted the healthy lifestyle that God presented to Ellen White. They were convinced it made a difference. But what kind of difference? Researchers at Loma Linda University in the 1950's decided to subject their fellow church members to scientific evaluation to see if this way of life promoted health as it claimed to do.

The story of this research is a fascinating one. Now forty years later, with almost 250 published papers on the subject, the evidence is in. *Yes, living the Adventist Lifestyle does make a difference.* Early reports based on a three year follow-up suggested that there was a 6.7 year difference between Adventist men and California men in general. Later analysis on the Adventist mortality study found that Adventist men live an average of 81.2 years or 7.3 years more than the average California male. Adventist women live an average of 83.9 years—4.4 years more than the average California female.

Vegetarian Adventist men surviving to age 30, Dr. Gary Fraser, principal investigator of the Adventist Health Study and professor of epidemiology and biostatistics at LLU, tells us have a life expectancy of 83.3 years and vegetarian SDA women 95.7 years—a remarkable addition of 9.5 and 6.1 years as compared to the life expectancies of other Californians.

Studies on Adventists in other countries, such as the Netherlands, Norway, and Poland have confirmed these findings. As word of these amazing findings have spread throughout the scientific community through numerous publications, and the presentation of papers at professional meetings, it has impacted fellow researchers and government officials. After one presentation by the late Dr. Roland Phillips, then director of the Adventist Health Study, a scientist commented, "It appears that the best insurance that one can take out today is to follow the lifestyle of Adventists."

In 1980, Sidney Katz, a Canadian official, reviewed the data on the benefits of the Adventist lifestyle. He said, "I've got some advice on how to improve the health of Canadians and, at the same time, lop billions of dollars off our annual health costs. I think we should study the lifestyle of adherents of the Seventh-day Adventist Church and then explore ways and means of persuading the public to emulate the Adventists in at least some ways."

When the U.S. Congress was adopting dietary guidelines for the nation, the Senate Select Committee utilized findings on Adventists, among others, to come up with the guidelines.

Dr. T. Oberlin of Harvard University stated, "Such an increase in life expectancy at these adult ages is greater than all of the gains in life expectancy made in the past 60 years in this country as a result of all the advances in medical skills and knowledge, plus innumerable improvements of the environment in which man lives."

Now, many scientists when discussing the results of Adventist studies, refer to the beneficial effects of the Adventist lifestyle as the "Adventist Advantage."

Even though it has been found that Adventists live healthier and longer, not all Adventists adhere to all of the principles with the same intensity. In fact, in a 1990 survey conducted by Survey Research Services of Loma Linda University, it was found many Adventists had harmful health habits that they wanted to change, such as getting too little exercise (69 percent), drinking too little water (42 percent), coping with too much stress (31 percent), and eating between meals (29 percent).

About 56 percent of the members felt that they were overweight, with about 8 percent of these indicating they were considerably overweight. Unfortunately, only 44 percent of those who believed they were overweight were trying to correct the problem.

### Interesting Findings from Research on Adventists

In 1978 Drs. Roland Phillips and Frank Lemon reported:

- Coronary heart disease mortality among California SDAs was 60 percent that of California nonsmokers.
- About 1/3 fewer coronary heart disease deaths occurred in male Adventist vegetarians than in SDA non-vegetarians.
- For every disease looked at, deaths of Adventists were less than what was expected among the general California population.

The figures mean, for example, that for every 100 Californians who died from coronary heart disease, only 55 of a similar-aged SDA control group would die—almost half the number. However, Dr. Fraser warns, “Many of these findings were not confirmed in the later, and methodologically superior Adventist Health Study. Remember that the old study could look at only fatal events—a serious restriction.” So we should be cautious about using these familiar older reports.

On November 11, 1986 a headline in the New York Times read, “Adventists Are Gold Mine For Research On Disease.” The article by Jane E.

Brody was based on an interview with Dr. David Snowden, who was the director of the Adventist Health Study at the time. The following are some of the findings that he reported.

- The Adventist study was the first to show a dose-response relationship between eating meat and disease. The more years people are meat-eaters and the more meat they consume each week, the greater is their risk of dying from heart disease and diabetes.
- Consumption of animal products in general is strongly related to an increased risk of prostate cancer but, on the other hand, no link was found to breast cancer in women.
- Exercise seems to protect against fatal coronary heart disease, especially among former smokers and current meat-eaters. But relatively little added benefit from exercise is seen for vegetarians and nonsmokers. (One explanation is that vegetarians and non-smokers may already have such “clean” coronary arteries that no effect is discernible from any further widening of these vessels that may be induced by exercise.)

### Epidemiologic Studies of Adventists

Dr. Gary Fraser, the present director of the on-going Adventist Health Study at Loma Linda, summarized the current research on Seventh-day Adventists in his 2001 article in the Autumn issue of Scope, The Loma Linda University Alumni Journal. This article is reprinted in this chapter with permission.

From a statistical point of view, ten years looks pretty good. But individually, when a person is looking at adding one or more hopefully healthy years to his or her life, *that is significant*. In other words, why go for ten years, if with a few lifestyle changes you could live an average of twelve years longer?

The story is told of a boy walking along the beach throwing beached starfish back into the water. Watching for a while, a man finally walked up to him and asked, “Why are you doing that? There are thousands of beached starfish—you can’t save them all.”

*Continued on page 294.*

Cause of Death:	Californians	SDA
bronchitis & emphysema	100	32
coronary heart disease	100	55
diabetes	100	55
all cancer	100	59
breast cancer	100	72
lung cancer	100	20
large bowel cancer	100	68
leukemia	100	62

From: Adventist Health Study pamphlet based on Adventist Mortality Study data, Loma Linda University, School of Public Health, 1970.

# The Adventist lifestyle

WHY IS THE WORLD SO INTERESTED IN THE DIETARY AND OTHER LIFESTYLE CHOICES OF ADVENTISTS?

Many Seventh-day Adventists may not be aware that their lifestyles have been the subject of much discussion and scrutiny by the scientific community for close to half a century.

"Although Adventists have long been convinced of the benefits of their special lifestyle," said Gary E. Fraser, MD, PhD, principal investigator of the Adventist Health Study, in a recent interview, "it was not until the early 1950s that the first scientific studies were conducted to document the validity of this belief."

The Framingham Heart Study, also in its infancy during 1950s, attracted a great deal of attention as medical scientists became increasingly interested in the relationship between dietary fats and blood cholesterol.

"Consequently, Adventists became an attractive group in which to test these theories," Dr. Fraser explains, "particularly those associating diet and the absence of cigarette smoking with risk of both cardiovascular disease and cancer."

Gary E. Fraser, MD, PhD, principal investigator of the Adventist Health Study and professor of epidemiology and biostatistics, stocks up on fruits, vegetables, and nuts which he discovered are protective against coronary heart disease and cancer.

The absence of smoking and alcohol use—two factors which often overshadow the findings with many other epidemiological studies—together with the interest most Adventists have regarding dietary habits make them an ideal population for such longitudinal studies.

The first large-scale epidemiological study funded by federal sources and conducted at Loma Linda came to be known as the Adventist Mortality Study. Principal investigators Frank Lemon, MD, and Richard L. Walden, MD, sent questionnaires to 47,866 California Adventists who completed the first brief section.

Subsequently, Drs. Lemon and Walden sent American Cancer Society questionnaires to a subset of 27,530 subjects from 1958 to 1965. Of these, 22,946 subjects ages 35 and older were included in the study. Informal follow-ups continued into 1985.

The Adventist Health Study, which began in 1973 with funding from the National Cancer Institute, was led by investigators Roland Phillips, MD, DrPH and Jan Kuzma, PhD.

From 1973 to 1976, two questionnaires were developed and tested for use in the upcoming study. The first questionnaire, primarily a census instrument, was to be completed by heads of the households. A database of 63,530 California Adventist households was created. Out of 36,805 household responses, 59,081 individuals over the age of 25 were identified.

In 1976, a lifestyle questionnaire was mailed to the same group which had received the census document. Of the 43,537 white non-Hispanic individuals contacted, 34,192 returned the lifestyle questionnaire. Of the 3,475 black subjects receiving the questionnaire, 1,739 individuals responded.

"The study looked at the relationships between diet, cigarette smoking, and risk of cancer among California Adventists," Dr. Fraser points out. "Scientists continued to collect data for both fatal and non-fatal events from this population through 1982 with a subsequent follow-up of deaths only through 1988."

In 1980, Dr. Fraser received funding from the National Heart, Lung, and Blood Institute, and later from the National Institute on Aging, to conduct a variety of demographic studies using the large database in place at Loma Linda University.

This group of studies starting in 1973, according to Dr. Fraser, makes up what has become known internationally as the Adventist Health Study.

"We have just received funding to develop a larger cohort study both of black and white Adventists across the United States," Dr. Fraser reports. "This will take advantage of what has already been learned utilizing new methods and technologies to help answer an increasing list of questions associating diet—or other aspects of lifestyle—with risk of chronic disease."

Dr. Fraser and his colleagues have been notified by the National Institutes of Health that funding for the next phase of the Adventist Health Study has been approved. Over the next four years, 125,000 Seventh-day Adventists will be enrolled through their local churches and asked to fill out a lifestyle questionnaire.

In addition to preparing for the upcoming study, Dr. Fraser is putting together a book that will be published by the Oxford University Press and will chronicle the various studies of Adventists over the years, including those conducted by the Adventist Health Study researchers.

"We're working on the final chapter," Dr. Fraser reveals. "We hope to have the book published within a year."

### *Design and findings of the Adventist Mortality Study (1958 to 1985)*

Drs. Walden and Lemon set about in 1958 to study all California Seventh-day Adventists. Church membership rolls existed but did not include any demographic information—even one's age.

Using the mailing list of one of the weekly Church papers, they mailed five copies of their questionnaire to each household, requesting that the head of the household enroll all Adventist members living there.

Three repeat mailings were sent to those who did not respond. A representative in each of the 541 Adventist churches was also asked to make public announcements during services, as well as distribute additional questionnaires.

With this methodology, 47,866 individuals were enrolled. It soon became evident, however, that some of those registered included inactive or unavailable church members.

"The researchers asked church clerks and pastors to provide an independent count of active members that included 91 percent of the total membership," Dr. Fraser details. "Using this amended count as a denominator, study investigators estimated that 88 percent of active and 'available' members had been enrolled."



Dr. Fraser has been in front of the cameras and microphones a number of times through the years as various findings have come to light and caught the interest of the media. As recent as July 9, 2001, he spoke with reporters regarding findings that California Adventists live longer than their non-Adventist neighbors—close to 10 years longer for Adventist vegetarian men.

Dr. Fraser adds, "This level of participation is quite remarkable for a study of this magnitude, but that's part of what makes the Adventist population such an ideal group for dietary and lifestyle research."

The questionnaire, according to Dr. Fraser, was extremely brief by present standards and asked about gender, date and place of birth, length of Church membership, race, marital status, occupational and residential history, and a general statement regarding personal health.

"The intention was to calculate mortality rates according to levels of some of the above demographic variables," Dr. Fraser suggests. "These were then compared to similar findings for other Californians."

In 1960, 21,380 of the original enrollees, as well as an additional 6,150 Adventists not previously enrolled—all over 29 years of age—volunteered to complete a second four-page questionnaire that this time included diet and many other variables.

With the assistance of E. C. Hammond, MD, who was concurrently conducting his own study of 1 million individuals from the general population known as the American Cancer Society Prospective Study, Drs. Walden and Lemon embarked on this second study of 27,530 Adventists from 198 congregations in California. Volunteers from each congregation were responsible for enrolling 10 to 20 local adult members from five households.

During the period from 1960 to 1965, these volunteers also agreed to report any deaths in their congregations. Since a major objective of the study was to report death rates in Adventists, and another was to discover whether Adventists with varying health habits experienced different rates of mortality among themselves.

Church clerks were also asked to help report all fatalities in the church membership between 1958 and 1965, as well as enough information to identify the subjects in California Department of Public Health death records. This enabled Drs. Walden and Lemon and their fellow researchers to determine the immediate and underlying causes of death.

A less formal follow-up from 1966 to 1985 ascertained the vital status of study subjects by computer linkage with the California state death tapes. It was found in a later substudy that 93 percent of the deaths were actually detected by this means. Adjustments were also made for the 3 to 6 percent of deaths estimated to have occurred outside of California.

The Adventist Mortality Study found that, for every 100 California non-Adventist men who died of cancer at a particular age, only 60 California Adventist men died at that same age. Similarly, for every 100 non-Adventist women, 76 Adventist women died at the same age of cancer.

Death from coronary heart disease (CHD) among California Adventist men at



a particular age was 34 percent below that of their non-Adventist counterparts; for Adventist women, the number was 2 percent below their non-Adventist neighbors.

## ***The Adventist Health Study: methodology and findings (1974 to 1988)***

Beginning in 1974 and continuing into the early 1980s, data was collected through a series of questionnaires that made up what has come to be known as the Adventist Health Study. Drs. Phillips and Kuzma led out in the original study, with Dr. Fraser first becoming involved in 1980 and

ultimately taking over as the principal investigator. The data has provided a wealth of findings that have attracted worldwide attention—the most recent being findings shared at a news conference on July 9, 2001.

“What has made the Adventist Health Study so valuable is the inclusion of much greater detail than the Adventist Mortality Study,” Dr. Fraser reasons. “Typically, when we consider conducting a major epidemiological study, we have certain questions that we hope to answer; however, our findings often suggest a host of new questions for future studies.

In addition to more extensive lifestyle questions, the main Adventist Health Study questionnaire contained 35 questions regarding the frequency of consumption of certain foods.

“The food frequency method is usually considered the only practical way to assess diet by questionnaire in thousands of subjects,” conveys Dr. Fraser. In the Adventist Health Study, questions simply required subjects to nominate one of eight frequencies of consumption for each of the 35 foods.

**1. What ONE type of bread do you use most of the time? *Mark only the one type used most frequently.***

- White (enriched or unenriched)-----→ ☐  
 100% whole wheat or whole grain -----→ ☐  
 Sprouted wheat or wheatberry-----→ ☐  
 Other (rye, cracked wheat,  
 pumpernickel, soy, etc.)-----→ ☐

**2. Mark the box which comes closest to how often you use each food when you are following your usual routine. *Be sure to mark in the correct column and mark “never” if never used.***

- a. Eggs (except those used in recipes) - (a)  
 b. Cheese (except cottage cheese) ---- (b)  
 c. Meat, poultry, or fish----- (c)  
 d. Sweets and desserts ----- (d)

		d	c	b	a
CURRENT	Never-----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USE:	Less than once/month -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1-2 times per month---	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1-2 times per week----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3-4 times per week----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5-6 times per week----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Once per day-----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	More than once/day---	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**3. Mark the box which comes closest to how frequently you NOW use each food or beverage when following your usual routine. *Be sure to mark in the correct column and mark “never” for foods you never use. You should make 11 marks for this page.***

- a. Low fat (2%) milk ----- (a)  
 b. Nonfat (skim) milk ----- (b)  
 c. Soymilk ----- (c)

		c	b	a
CURRENT	Never or almost never -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USE:	Less than once per week	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Several times per week-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Once per day-----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2-3 times per day-----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4-5 times per day-----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Over 5 times per day --	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Above are three examples of questions included in the main Adventist Health Study questionnaire that subjects were asked to complete.

Frequencies ranged from "rarely or never" to "more than six times daily" (see examples of questions on page 19).

For most variables in the census and lifestyle questionnaires, the rate of missing data was between 4 and 7 percent. There did not appear to be a higher rate of missing data for "sensitive" variables among Adventists, such as pork consumption, cigarette smoking, or alcohol use.

"Thus, the investigators believe that the population responded as accurately to these variables as any others," states Dr. Fraser. "Nevertheless, with this potential sensitivity in mind, the investigators gave much effort to assuring study subjects of the anonymity of their responses."

The design of the Adventist Health Study also included methodology for measuring both fatal and non-fatal disease events among the study population—an important advance over the original Adventist Mortality Study.

Upon completing the lifestyle questionnaire, the non-Hispanic white population was first followed for six years until December of 1982. All new or incident events of cancer and coronary heart disease were documented. The same population was then followed until 1983 to document fatalities only, as well as obtain death certificates for those who were deceased.

Black Adventists were followed through 1985 for fatalities only, but death certificates were not obtained which would have revealed the cause of death.

From 1976 to 1982, annual questionnaires were sent to the non-Hispanic white population asking whether they had been hospitalized and, if so, where. The response rate to the annual questionnaires consistently exceeded 90 percent. The final and most important contact in early 1993 yielded a response rate of 99.5 percent.

Adventist Health Study investigators used information from the annual questionnaires to guide field representatives who collected details of the hospitalizations, visiting each California hospital named by any subject and reviewing each medical chart.

Any mention of cancer, tumor, neoplasm, or malignancy, as well as myocardial infarction (heart attack), coronary thrombosis, cardiac arrest, myocardial ischemia, coronary insufficiency, coronary angiography, or heart catheterization resulted in portions of the charts, medical and nursing history, and electrocardiographs being microfilmed, and cardiac enzyme results being abstracted to coding forms.

"Field representatives visited 698 hospitals in California," Dr. Fraser attests. "We also contacted 960 out-of-state hospitals by mail for those study participants hospitalized outside California who had moved or were on vacation."

Fatal events which occurred outside the hospital were found through local church records, responses to a questionnaire by next of kin, and by computerized matching with the California state death tapes.

"As 15 percent or so of our population moved out of state," Dr. Fraser adds, "computerized matching with the National Death Index was also used to find deaths out of state beginning in 1979, when this service became available."

The research methodology of both the Adventist Mortality Study and Adventist Health Study have withstood the scrutiny of numerous peer-reviewed journals. To date, various findings from the mortality study have been published in 39 peer-reviewed journals, while the number of similar publications for the Adventist Health Study stands at 43.

What are the key findings of the Adventist Health Study? For coronary heart disease, the data for Adventists was compared with data from a study of non-Adventists conducted at Stanford University from 1975 to 1985—remarkably concurrent with the Adventist Health Study.

"We found that Adventists had one half the risk of coronary heart disease as their Stanford study counterparts," Dr. Fraser confirms. "We only compared data for subjects up to the age of 75 because that was the upper age limit for data collected by the Stanford study."

It was also found that Adventists ages 60 or younger experienced a 60 to 70 percent reduction in risk, while those over 60 years of age experienced a 20 to 30 percent risk reduction.

"To be sure that our findings were credible," Dr. Fraser grants, "we looked at traditional risk factors in relation to heart disease rates, factors such as exercise, obesity, high blood pressure, and diabetes—the findings for Adventists were consistent with those of other population studies."

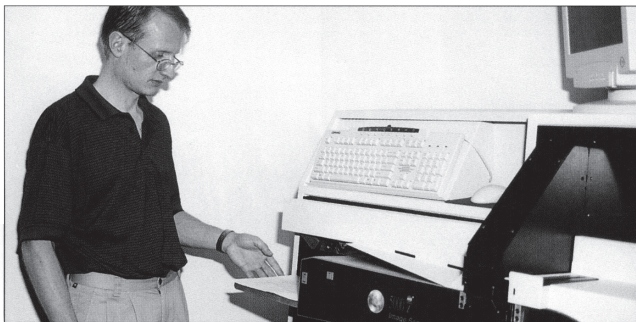
Findings relating to diet—the "strength of the study" in Dr. Fraser's opinion—showed that vegetarian Adventists had a

Cancer site	Standardized incidence ratio	95% confidence interval
Colon	0.78	0.62–0.98
Stomach	0.66	0.39–1.12
Bladder	0.55	0.36–0.86
Lymphoma	1.62	1.14–2.31
Leukemia	0.79	0.48–1.29
Lung	0.30	0.19–0.47
Pancreas*	0.68	0.41–1.14
Breast	0.87	0.68–1.12
Ovary*	1.14	0.63–2.07
Uterus*	1.33	0.86–2.04
Prostate*	1.12	0.90–1.39
All smoking related	0.46	0.36–0.58
All sites	0.77	0.70–0.85

*\*Invasive only*

A recent comparison of cancer incidence in California Adventists 75 years of age and older with similar-aged subjects from the Los Angeles County and Oakland Bay Area tumor registries (1976 to 1982) yielded the findings above, showing that in a number of cases California Adventists enjoyed protection from certain cancers





David Shavlik, MSPH, demonstrates how questionnaires from a projected 125,000 new study subjects will be fed through the NCS 5000i, a scanner/reader manufactured by National Computer Systems. The first phase of the new Adventist Health Study will take four years to complete and will involve Adventists across the United States.

significantly lower risk for both fatal and nonfatal heart attacks as compared to non-vegetarian Adventists. The protection was greater for men, with nonvegetarians having twice the risk. For women, similar risks were evident for nonvegetarian young and middle-age subjects.

In 1992, the "Nut Study" garnered worldwide media attention when the findings were published in the *Archives of Internal Medicine*. Dr. Fraser and his colleagues discovered a relationship between consuming nuts five or more times a week and having half the risk for a fatal or nonfatal heart attack—evident for both men and women. This has subsequently been confirmed by several large studies of non-Adventists.

Whole grain bread versus white bread provided approximately a 25 percent reduction in the risk of a fatal or nonfatal heart attack. Consumption of red meat, in particular, greatly increased the risk of certain cancers, according to Dr. Fraser.

"We found that Adventists who avoided eating meat had 50 to 60 percent the risk of developing colon cancer as their meat-eating counterparts," notes Dr. Fraser. "Meat eaters, when they added beans to their diet, experienced some protection from colon cancer due to the beans."

Dr. Fraser and his fellow researchers were careful to factor in all of the other possible reasons for their findings, probably pointing to meat consumption alone as the culprit. For prostate cancer, vegetarian California Adventists had

approximately 50 percent of the risk. For ovarian cancer, meat eaters were two times more at risk. Meat eaters were also at a 50 percent higher risk of developing bladder cancer.

On the flip side, fruit was shown to be protective against lung, prostate, ovarian, and pancreatic cancers, with a reduced risk of up to 75 percent.

Tomatoes were protective against both prostate and ovarian cancer, providing a 43 percent risk reduction for prostate and a 60 percent reduced risk for ovarian.

Soy milk, consumed more than once a day, provided up to an 80 percent reduction in the risk for prostate cancer.

### Longevity study

As recent as July 9, 2001, findings from the Adventist Health Study were still making the news.

In an article, titled "Ten years of life: is it a matter of choice?" and published in the July 9 issue of the *Archives of Internal Medicine*, Dr. Fraser and his research team were able to establish a connection between certain lifestyle characteristics and increased life expectancy.

"California Adventists appear to be the longest-lived population that has yet been described in a formal way," Dr. Fraser said during a news conference held on the Loma Linda University campus. "The expected ages at death for those already surviving to age 30 is 81.2 years in men and 83.9 years in women." He continued, "This corresponds to an extra 7.3 years in

men and 4.4 years in women, when compared to other Californians."

Vegetarian Adventist men surviving to age 30, observes Dr. Fraser, have a life expectancy of 83.3 years and vegetarian women 85.7 years—a remarkable addition of 9.5 and 6.1 years respectively as compared to the life expectancies of other Californians.

"Our results, looking at five common behaviors individually or all together, directly estimate effects on life expectancy," he indicates. The behavioral factors included a vegetarian diet, eating a handful of nuts five or more days a week, vigorous and regular exercise, smoking history, and body mass (based on body mass index or BMI).

"Although the higher risk combination was quite uncommon in Adventists," Dr. Fraser clarifies, "it is much more common in the general population, as most people are nonvegetarian, eat nuts infrequently, and obesity is very common."

Each factor—being vegetarian, a non-smoker, regular exerciser, nut eater, and non-obese—adds between 1.25 and 2.75 years of life, with nut consumption and exercise having slightly stronger effects.

"Our results strongly suggest that there is real potential for other Americans to also extend their life expectancy by 5 to 10 years with relatively simple behavioral choices," Dr. Fraser concludes.

### The next phase of research

The National Institutes of Health has given word that it will fund the next phase of the Adventist Health Study. Pilot studies are already underway to test the newest questionnaire.

Plans have been set to enroll 125,000 Seventh-day Adventists across the United States over the next four years.

A number of questions raised by the previous studies will be covered in this latest venture.

"I think we've proven the benefits of the Adventist lifestyle," Dr. Fraser insists. "Perhaps some of our neighbors can benefit from what we've learned."

—SCOPE

"No," said the boy, "But what I do will make a difference to this one!"

Helping others live up to all the knowledge we have been given about the health message will make a difference to individuals. And it's our job to share this message and give them a chance to live longer—and healthier.

### **Bibliography of Health-related Studies Among Seventh-day Adventists.**

The findings from research on Adventists are fascinating and convincing—*There is an Adventist Advantage*.

Although much can be learned by reading a summary of the research findings as given in this chapter, reading the original sources can be extremely instructive.

As of May 24, 2001 the bibliography of health-related research studies among Seventh-day Adventists includes 302 articles. This bibliography is being continually updated at the Center for Health Research (CHR) at the Loma Linda University School of Public Health. For your convenience, the Center for Health Research has given permission for this list to be published here. To receive an up-dated list in the future, you can either write to the Center for Health Research, Loma Linda University, Loma Linda, CA 92350 or call: (909) 824-4753.

### **BIBLIOGRAPHY OF HEALTH-RELATED RESEARCH STUDIES AMONG SEVENTH-DAY ADVENTISTS UPDATED: May 24, 2001**

1. Hardinge MG, Stare FJ: Nutritional studies of vegetarians. I. Nutritional, physical, and laboratory studies. *Am J Clin Nutr* 1954; 2:73-82.
2. Hardinge MG, Stare FJ: Nutritional studies of vegetarians. II. Dietary and serum levels of cholesterol. *Am J Clin Nutr* 1954; 2:83-88.
3. Hardinge MG, Chambers AC, Crooks H, Stare FJ: Nutritional studies of vegetarians. III. Dietary levels of fiber. *Am J Clin Nutr* 1958; 6:523-525.
4. Wynder EL, Lemon FR: Cancer, coronary artery disease, and smoking: A preliminary report on differences in incidence between Seventh-day Adventists and others. *Calif Med* 1958; 89:267-272.
5. Downs RA, Dunn MM, Richie EL: Report of dental findings of Seventh-day Adventists as compared to comparable students in other schools. *Bull Amer Assoc Pub Health Dent* 1958; 18:19-21.

### **The Seventh-day Adventist Lifestyle**

- 1863 The church adopts the "health message"
- 1866 First Adventist health institution
- 1996 More than 500 hospitals and clinics in 196 countries

More than 12 million members=  
the healthiest people in the world

6. Wynder EL, Lemon FR, Bross IJ: Cancer and coronary artery disease among Seventh-day Adventists. *Cancer* 1959; 12:1016-1028.
7. Donnelly CJ: A comparative study of caries experience in Adventists and other children. *Public Health Rep* 1961; 76:209-212.
8. Hardinge MG, Crooks H, Stare FJ: Nutritional studies of vegetarians. IV. Dietary fatty acids and serum cholesterol levels. *Am J Clin Nutr* 1962; 10:516-524.
9. Dysinger PW, Lemon FR, Crenshaw GL, Walden RT: Pulmonary emphysema in a non-smoking population. *Dis Chest* 1963; 43:17-2
10. Larsson E, Webb AT: Cancer survey: Experiences in mass screening of cervical smears. *Obstet Gynecol* 1963; 22:630-635.
11. Hardinge MG, Crooks H. Non-Flesh Diets. I. Historical Background. *J Am Dietet Assoc* 1963; 43:545-9.
12. Hardinge MG, Crooks H. Non-Flesh Diets. II. Scientific Literature. *J Am Dietet Assoc* 1963; 43:550-8.
13. Hardinge MG, Crooks H. Non-Flesh Diets. III. Adequate and Inadequate. *J Am Dietet Assoc* 1963; 45:537-42.
14. Walden RT, Shaefer LE, Lemon FR, Sunshine A, Wynder EL: Effect of environment on the serum cholesterol-triglyceride distribution among Seventh-day Adventists. *Am J Med* 1964; 36:269-276.
15. Lemon FR, Walden RT, Woods RW: Cancer of the lung and mouth in Seventh-day Adventists: A preliminary report on a population study. *Cancer* 1964; 17:486-497.
16. Wynder EL, Lemon FR, Mantel N: Epidemiology of persistent cough. *Am Rev Resp Dis* 1965; 91:679-700.
17. Hardinge MG, Crooks H, Stare FJ: Nutritional studies of vegetarians. V. Proteins and essential amino acids. *J Am Diet Assoc* 1966; 48:25-28.
18. Lemon FR, Walden RT: Death from respiratory system disease among Seventh-day Adventist men. *JAMA* 1966; 198:117-126.
19. Glass RL, Hayden J: Dental Caries in Seventh-day Adventist Children. *J Dent Child* 1966; 33:22-23.
20. Holmes CB, Quade D, Collier D. Comparative study of nine variables for Seventh-day Adventist and non-Adventist teenagers. *J Dent Res* 1967; 46(4):650-5.
21. Marsh AG, Ford DL, Christensen DK. Metabolic



- Response of Adolescent Girls to a Lacto-Ovo-Vegetarian Diet. *J Am Diet Assn* 1967; 51:441-6.
22. Mozar HN, Farag SA, Andren HE, Peters JR: The mental health of Seventh-day Adventists. *Med Arts Sci* 1967; 21:59-66.
23. West RO, Hayes OB: Diet and serum cholesterol levels: A comparison between vegetarians and nonvegetarians in a Seventh-day Adventist group. *Am J Clin Nutr* 1968; 21:853-862.
24. Amundsen W. Experience of the Seventh-day Adventist Church in North America. *Am Ann Deaf* 1968;113(4):896-7.
25. Lemon FR, Kuzma JW: A biologic cost of smoking: Decreased life expectancy. *Arch Environ Health* 1969; 18:950-955.
26. Cohen CA, Hudson AR, Clausen JL, Knelson JH: Respiratory symptoms, spirometry, and oxidant air pollution in nonsmoking adults. *Am Rev Respir Dis* 1972; 105:251-261.
27. Starr P. Hypercholesterolemia in School Children: A Preliminary Report. *Amer J Clin Path* 1971;56:515-22.
28. Dysinger PW: Traffic accidents and human ecology. *Med Arts and Sciences* 1972; 26:27-41.
29. Kuzma JW, Dysinger PW, Strutz P, Abbey D: Nonfatal traffic accidents in relation to biographical, psychological, and religious factors. *Accid Anal Prev* 1973; 5:55-65.
30. Armstrong BK, Davis RE, Nicol DJ, Van Merwyk AJ, Larwood CJ: Hematological, vitamin B12, and folate studies on Seventh-day Adventist vegetarians. *Am J Clin Nutr* 1974; 27:712-718.
31. Phillips RL: Role of lifestyle and dietary habits in risk of cancer among Seventh-day Adventists. *Cancer Res* 1975; 35(Suppl):3513-3522.
32. Ruys J, Hickie JB: Serum cholesterol and triglyceride levels in Australian adolescent vegetarians. *Br Med J* 1976; 2:87.
33. Phillips RL, Kuzma JW: Estimating major nutrient intake from self-administered food frequency questionnaires. (Abstract) *Am J Epidemiol* 1976; 104:354-355.
34. Taylor CB, Allen ES, Mikkelsen B, Ho K: Serum cholesterol levels of Seventh-day Adventists. *Arterial Wall* 1976; 3:175-179.
35. Walker AR: Colon cancer and diet, with special reference to intakes of fat and fiber. *Am J Clin Nutr* 1976;29(12): 1417-26.
36. Phillips RL, Kuzma JW: Rationale and method for an epidemiologic study of cancer among Seventh-day Adventists. *Natl Cancer Inst Monogr* 1977; 47:107-112.
37. Armstrong B, Van Merwyk AJ, Coates H: Blood pressure in Seventh-day Adventist vegetarians. *Am J Epidemiol* 1977; 105:444-449.
38. Goldberg MJ, Smith JW, Nichols RL: Comparison of the fecal microflora of Seventh-day Adventists with individuals consuming a general diet: Implications concerning colonic carcinoma. *Ann Surg* 1977; 186:97-100.
39. Finegold SM, Sutter VL, Sugihara PT, Elder HA, Lehmann SM, Phillips RL: Fecal microbial flora in Seventh-day Adventist populations and control subjects. *Am J Clin Nutr* 1977; 30:1781-1792.
40. Phillips RL, Lemon FR, Beeson WL, Kuzma JW: Coronary heart disease mortality among Seventh-day Adventists with differing dietary habits: A preliminary report. *Am J Clin Nutr* 1978; 32(Suppl):S191-S198.
41. MacDonald IA, Webb GR, Mahony DE: Fecal hydroxysteroid dehydrogenase activities in vegetarian Seventh-day Adventists, control subjects, and bowel cancer patients. *Am J Clin Nutr* 1978; 31(Suppl):S233-S238.
42. Finegold SM, Sutter VL: Fecal flora in different populations, with special reference to diet. *Am J Clin Nutr* 1978; 31(Suppl):S116-S122.
43. Simons LA, Gibson JC, Paino C, Hosking M, Bullock J, Trim J: The influence of a wide range of absorbed cholesterol on plasma cholesterol levels in man. *Am J Clin Nutr* 1978; 31:1334-1339.
44. Trahms CM, Larson LD, Worthington BS (int. by Monsen ER): Dietary intakes and growth of Seventh-day Adventist preschool children. (Abstract) *Am J Clin Nutr* 1978; 31:720.
45. Webster IW, Rawson GK: Health status of Seventh-day Adventists. *Med J Aust* 1979; 1:417-420.
46. Berkel J: The Clean Life: Some Aspects of Nutritional and Health Status of Seventh-day Adventists in the Netherlands. Amsterdam, Netherlands, 1979, Drukkerij Insulinde.
47. Smith S, Shultz T, Ross J, Leklem J: Nutrition and cancer attitudes and knowledge of Seventh-day Adventists. (Abstract) *Fed Proc* 1979; 38:713.
48. Enstrom JE: Cancer mortality among low-risk populations. *CA--A Cancer Journal for Clinicians* 1979; 29:352-361.
49. Armstrong B, Clarke H, Martin C, Ward W, Norman N, Masarei J: Urinary sodium and blood pressure in vegetarians. *Am J Clin Nutr* 1979;32:2472-6.
50. Simons L, Gibson J, Jones A, Bain, D: Health Status of Seventh-day Adventists. (Letter to the Editor) *The Med J of Australia* 1979; 2:148.
51. Bachrach S, Fisher J, Parks JS. An outbreak of vitamin D deficiency rickets in a susceptible population. *Pediatrics* 1979;64(6):871-7.
52. Gori GB. Dietary and nutritional implications in the multifactorial etiology of certain prevalent human cancers. *Cancer* 1979;43(5 Suppl):2151-61.
53. Marsh AG, Sanchez TV, Mickelsen O, Keiser J, Mayor G: Cortical bone density of adult lacto-ovo-vegetarian and omnivorous women. *J Am Diet Assoc* 1980; 76:148-151.
54. Phillips RL: Cancer among Seventh-day Adventists. *J Environ Pathol Toxicol* 1980; 3:157-169.
55. Phillips RL, Kuzma JW, Lotz TM: Cancer mortality among comparable members versus non-members of the Seventh-day Adventist church. In: *Cancer Incidence in Defined Populations (Banbury Report 4; Cairns J, Lyon JL, Skolnick M, eds). New York, 1980, Cold Spring Harbor Laboratory. pp. 93-108.*
56. Phillips RL, Garfinkel L, Kuzma JW, Beeson WL, Lotz

- TL, Brin B: Mortality among California Seventh-day Adventists for selected cancer sites. *JNCI* 1980; 65:1097-1107.
57. Phillips RL, Kuzma JW, Beeson WL, Lotz T: Influence of selection versus lifestyle on risk of fatal cancer and cardiovascular disease among Seventh-day Adventists. *Am J Epidemiol* 1980; 112:296-314.
58. Reddy BS, Sharma C, Darby L, Laakso K, Wynder EL: Metabolic epidemiology of large bowel cancer. Fecal mutagens in high- and low-risk population for colon cancer: A preliminary report. *Mutat Res* 1980; 72:511-522.
59. Reddy BS, Sharma C, Wynder E: Fecal factors which modify the formation of fecal co-mutagens in high- and low-risk population for colon cancer. *Cancer Letters* 1980; 10:123-132.
60. Kondo AT: Belief systems and health status. Ph.D. Dissertation, University of Texas at Galveston, 1980. (Available from University Microfilms International, Ann Arbor, Michigan).
61. Harris RD, Phillips RL, Williams PM, Kuzma JW, Fraser GE: The child-adolescent blood pressure study: I. Distribution of blood pressure levels in Seventh-day Adventist (SDA) and non-SDA children. *Am J Public Health* 1981; 71:1342-1349.
62. Fraser GE, Swannell RJ: Diet and serum cholesterol in Seventh-day Adventists: A cross-sectional study showing significant relationships. *J Chron Dis* 1981; 34:487-501.
63. Insel PM, Fraser GE, Phillips RL, Williams PM: Psychosocial factors and blood pressure in children. *J Psychosom Res* 1981; 25:505-511.
64. Kuzma JW, Beeson WL: The relationship of lifestyle characteristics to mortality among California Seventh-day Adventists. Proceedings of the 19th National Meeting of the Public Health Conference on Records and Statistics, DHHS Publication No. (PHS) 81-1214, 1981.
65. Waaler H, Hjort PF: Høyere levealder hos norske adventister 1960-1977: Et budskap om livsstil og helse? *Tidsskr Nor Laegeforen* 101:623-627, 1981. (Translated to English: Low mortality among Norwegian Seventh-day Adventists 1960-1977: A message on lifestyle and health?). ct
66. Nestel PJ, Billington T, Smith B. Low Density and High Density Lipoprotein Kinetics and Sterol Balance in Vegetarians. *Metabolism* 1981; 30:941-5.
67. Shultz TD: Comparative nutrient intake and biochemical interrelationships among healthy vegetarian and non-vegetarian Seventh-day Adventists, nonvegetarians, and hormone-dependent cancer subjects. *Diss Abstr Int* 1981; 41:4068-B.
68. Fraser GE, Jacobs DR Jr, Anderson JT, Foster N, Palta M, Blackburn H: The effect of various vegetable supplements on serum cholesterol. *Am J Clin Nutr* 1981; 34:1272-1277.
69. Sanchez A, Kissinger DG, Phillips RL: A hypothesis on the etiological role of diet on age of menarche. *Med Hypothesis* 1981; 7:1339-1345.
70. Armstrong BK, Brown JB, Clarke HT, Crooke DK, Hahnel R, Masarei JR, Ratajczak T: Diet and reproductive hormones: A study of vegetarian and nonvegetarian postmenopausal women. *JNCI* 1981; 67:761-767.
71. Shultz TD, Leklem JE: Urinary 4-pyridoxic acid, urinary vitamin B6 and plasma pyridoxal phosphate as measures of vitamin B6 status and dietary intake in adults. In: *Methods in Vitamin B6 Nutrition: Analysis and Status Assessment* (Leklem JE, Reynolds RD, eds). New York, 1981, Plenum Press. pp 297-320.
72. Editorial: Health and longevity among Seventh-day Adventists. *Sth African Med J* 1981; 59:925.
73. Anderson BM, Gibson RS, Sabry JH: The iron and zinc status of long-term vegetarian women. *Am J Clin Nutr* 1981; 34:1042-1048.
74. Gray GE, Williams P, Gerkins V, Brown JB, Armstrong B, Phillips RL, Casagrande JT, Pike MC, Henderson BE: Diet and hormone levels in Seventh-day Adventist girls. *Prev Med* 1982; 11:103-107.
75. Snowdon DA, Phillips RL, Kuzma JW: Age at baptism into the Seventh-day Adventist Church and risk of death due to ischemic heart disease -A preliminary report. In: *Environmental Effects on Maturation* (Banbury Report No.11; Hunt VR, Smith MK, Worth D, eds). New York, 1982, Cold Spring Harbor Laboratory. pp 465-472.
76. Turjman N, Guidry C, Jaeger B, Mendeloff AI, Calkins B, Phillips RL, Nair PP: Fecal bile-acids and neutral sterols in Seventh-day Adventists and the general population in California. In: *Colon and Nutrition* (Falk Symposium 32; Kasper H, Goebell H, eds). Lancaster, England, 1982, MTP Press, Ltd. pp 291-297.
77. Rouse IL, Armstrong BK, Beilin LJ: Vegetarian diet, lifestyle and blood pressure in two religious populations. *Clin Exp Pharmacol Physiol* 1982;9:327-30.
78. Ferguson LR, Alley PG: Faecal mutagens from population groups within New Zealand at different risk of colorectal cancer. In: *Mutagens in Our Environment* (Sorsa M, Vainio H, eds). New York, 1982, Alan R. Liss, Inc. pp 423-429.
79. Nnakwe N, Kies C, Fox HM: Calcium and phosphorus utilization by omnivores and vegetarians. Proceedings of Nebraska Academy of Sciences and Affiliated Societies 1982; 92:29.
80. Miller AB. Risk factors from geographic epidemiology for gastrointestinal cancer. *Cancer* 1982;50(11 Suppl):2533-40.
81. Fraser GE, Phillips RL, Harris R: Physical fitness and blood pressure in school children. *Circulation* 1983; 67:405-412.
82. Shultz TD, Leklem JE: Selenium status of vegetarians, nonvegetarians, and hormone-dependent cancer subjects. *Am J Clin Nutr* 1983; 37:114-118.
83. McEndree LS, Kies CV, Fox HM: Iron intake and iron nutritional status of lacto-ovo-vegetarian and omnivore students eating in a lacto-ovo-vegetarian food service. *Nutr Rep Int* 1983; 27:199-206.

84. Marsh AG, Sanchez TV, Chaffee FL, Mayor GH, Mickelsen O: Bone mineral mass in adult lacto-ovo-vegetarian and omnivorous males. *Am J Clin Nutr* 1983; 37:453-456.
85. Phillips RL, Snowdon DA: The association of meat and coffee with cancers of the large bowel, breast, and prostate among Seventh-day Adventists--Preliminary results. *Cancer Research* 1983; 43(Suppl):2403S-2408S.
86. Jensen OM: Cancer risk among Danish male Seventh-day Adventists and other temperance society members. *JNCI* 1983; 70:1011-1014.
87. Rouse IL, Armstrong BK, Beilin LJ: The relationship of blood pressure to diet and lifestyle in two religious groups. *J Hypertens* 1983; 1:65-71.
88. Phillips RL, Snowdon DA, Brin BN: Cancer in vegetarians. In: *Environmental Aspects of Cancer--The Role of Macro and Micro Components of Foods* (Wynder EL, Leveille GA, Weisburger JH, Livingston EG, eds). Westport, Connecticut, 1983, Food and Nutrition Press. pp 53-72.
89. Shultz RD, Leklem JE: Nutrient intake and hormonal status of premenopausal vegetarian Seventh-day Adventists and premenopausal non-vegetarians. *Nutrition and Cancer* 1983; 4:247-259.
90. Snowdon DA: Epidemiology of aging: Seventh-day Adventists--A bellwether for future progress. In: *Intervention in the Aging Process* (Regelson W, Sinex FM, eds). New York 1983, Alan R. Liss. pp 141-149.
91. Shultz TD, Leklem JE: Dietary status of Seventh-day Adventists and nonvegetarians. *J Am Diet Assoc* 1983; 83:27-33.
92. Berkel J, deWaard F: Mortality pattern and life expectancy of Seventh-day Adventists in the Netherlands. *Int J Epidemiol* 1983; 12:455-459.
93. Semmens JB, Rouse IL, Beilin LJ, Masarei JRL: Relationship of plasma HDL-cholesterol to testosterone, estradiol, and sex-hormone-binding globulin levels in men and women. *Metabolism* 1983; 32:428-432.
94. Semmens JB, Rouse IL, Beilin LJ, Masarei JRL: Relationships between age, body weight, physical fitness, and sex-hormone-binding globulin capacity. *Clin Chim Acta* 1983; 133:295-300.
95. Jedrychowski W, Tobiasz-Adamczyk B, Olma A, Gradzikiewicz P: Porównani parametrów trwania życia w grupie członków Kościoła Adwentystów Dnia Siodmego i w populacji ogólnej. (A comparison of life duration parameters in a group of Adventist Church followers and the general population). *Polski Tygodnik Lekarski* 1983; 32:14-17.
96. Abu-Assal M, Craig WJ: The Zinc Status of Pregnant Vegetarian Women. *Nutr Rep Int* 29 (2): 485-494, 1984.
97. Davidson L, Vandongen R, Rouse IL, Beilin LJ, Tunney A: Sex-related differences in resting and stimulated plasma noradrenaline and adrenaline. *Clin Science* 1983; 67:347-352.
98. Bing H, Frentzel-Beyme R: Schützt die Lebensweise von Vegetariern vor einigen Erkrankungen? (Are Vegetarians protected from some Diseases by their Diet?). *Akt ErnEhr* 1983; 8:187-191.
99. Rouse IL, Beilin LJ, Armstrong BK, Vando-gen R: Vegetarian diet, blood pressure and cardiovascular risk. *Aust NZ J Med* 1984; 14:439-43.
100. Masarei JRL, Rouse IL, Lynch WJ, Robertson K, Vandongen R, Beilin LJ: Vegetarian diets, lipids and cardiovascular risk. *Aust NZ J Med* 1983; 14:400-404.
101. Shultz TD, Leklem JE: Vitamin B6 status of Seventh-day Adventist vegetarians, nonvegetarians, and hormone dependent cancer subjects. (Abstract) Presented at Federation of the American Society for Experimental Biology Conference, 1984.
102. Cooper R, Allen A, Goldberg R, Trevisan M, Van Horn L, Liu K, Steinhaver M, Rubenstein A, Stamler J: Seventh-day Adventist adolescents--lifestyle patterns and cardiovascular risk factors. *West J Med* 1984; 140:471-477.
103. Zollinger TW, Phillips RL, Kuzma JW: Breast cancer survival rates among Seventh-day Adventists and non-Seventh-day Adventists. *Am J Epidemiol* 1984; 119:503-509.
104. Kahn HA, Phillips RL, Snowdon DA, Choi W: Association between reported diet and all-cause mortality. Twenty-one-year follow-up on 27,530 adult Seventh-day Adventists. *Am J Epidemiol* 1984; 119:775-787.
105. Snowdon DA, Phillips RL: Coffee consumption and risk of fatal cancers. *Am J Public Health* 1984; 74:820-823.
106. Snowdon DA, Phillips RL, Choi W: Diet, obesity and risk of fatal prostate cancer. *Am J Epidemiol* 1984; 120:244-250.
107. Calkins BM, Whittaker DJ, Rider AA, Turjman N: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Population: demographic and anthropometric characteristics. *Am J Clin Nutr* 1984; 40(Suppl):887-895.
108. Calkins BM, Whittaker DJ, Nair PP, Rider AA, Turjman N: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. *Am J Clin Nutr* 1984; 40(Suppl):896-905.
109. Rider AA, Calkins BM, Arthur RS, Nair PP: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Concordance of nutrient information obtained by different methods. *Am J Clin Nutr* 1984; 40(Suppl):906-913.
110. Rider AA, Arthur RS, Calkins BM: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Laboratory analysis of 3-day composite of food samples. *Am J Clin Nutr* 1984; 40(Suppl):914-916.
111. Rider AA, Arthur RS, Calkins BM, Nair PP: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Selected biochemical parameters in blood and urine. *Am J Clin Nutr* 1984; 40(Suppl):917-920.
112. Kritchevsky D, Tepper SA, Goodman G: Diet, nutrition

- intake, and metabolism in populations at high and low risk for colon cancer. Relationship of diet to serum lipids. *Am J Clin Nutr* 1984; 40(Suppl):921-926.
111. Nair PP, Turjman N, Kessie G, Calkins B, Goodman GT, Davidovitz H, Nimmagadda G: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Dietary cholesterol, B-sitosterol, and stigmaterol. *Am J Clin Nutr* 1984; 40(Suppl):927-930.
112. Nair PP, Turjman N, Goodman GI, Guidry C, Calkins BM: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Metabolism of neutral sterols. *Am J Clin Nutr* 1984; 40(Suppl):931-936.
113. Turjman N, Goodman GT, Jaeger B, Nair PP: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Metabolism of bile acids. *Am J Clin Nutr* 1984; 40(Suppl):937-941.
114. Stich HF, Hornby AP, Dunn BP. The effect of dietary factors on Nitrosopoline levels in human urine. *Int J Cancer* 1984; 33:625-8.
115. Kurup PA, Jayakumari N, Indira M, Kurup GM, Vargheese T, Mathew A, Goodman GT, Calkins BM, Kessie G, Turjman N, Nair PP: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Composition, intake and excretion of fiber constituents. *Am J Clin Nutr* 1984; 40(Suppl): 942-6.
116. Tepper SA, Goodman GT, Kritchevsky D: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Binding of bile salts to dietary residues. *Am J Clin Nutr* 1984; 40(Suppl):947-8.
117. Goodman GT, Davidovitz H, Tepper SA, Kritchevsky D: Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Comparison of serum hexoseaminidase levels. *Am J Clin Nutr* 1984; 40(Suppl):949-951.
118. Snowdon DA, Phillips RL, Fraser GE: Meat consumption and fatal ischemic heart disease. *Prev Med* 1984; 13:490-500.
119. Howden GF: The cariostatic effect of betel nut chewing. *Papua New Guinea Med J* 1984; 27:123-131.
120. Nnakwe N, Kies C, McEndree L: Calcium and phosphorus nutritional status of lacto-ovo-vegetarian and omnivore students consuming meals in a lacto-ovo-vegetarian food service. *Nut Rep Intl* 1984;29:365-9.
121. Snowdon DA, Sumbureru D, Kuzma JW: Bereavement and risk of death from major causes among Seventh-day Adventists. (Abstract) *Am J Epidemiol* 1984; 120:480.
122. Hodgkin JE, Abbey DE, Euler G, Magie AR. COPD prevalence in nonsmokers in high and low photo-chemical air pollution areas. *Chest* 1984;86:830-8.
123. Modeste NN, Abbey DE, Hopp JW: Hypertension in a Caribbean population. *Intl Quarterly of Commun Health Education* 1984-85; 5:203-211.
124. Spuehler J, Howie B, Shultz TD: Dietary nutrients and plasma and urinary hormone levels in premenopausal Seventh-day Adventist (SDA) vegetarians. (Abstract) *Federation Proc.* 1985;44:768.
125. Jedrychowski W, Tobiasz-Adamczyk B, Olma A, Gradzikiewicz P: Survival rates among Seventh-day Adventists compared with the general population in Poland. *Scand J Soc Med* 1985; 23:49-52.
126. Halvorsen BA, Svendsen B: Lavere dodelighet av kreft og hjerte- og karsykdommer hos adventister. *Tidsskr Nor Laegeforen* 1985; 24:1620-1625.
127. Phillips RL, Snowdon DA: Dietary relationships with fatal colo-rectal cancer among Seventh-day Adventists. *J Natl Ca Instit* 1985; 74:307-317.
128. Snowdon DA, Phillips RL: Does a vegetarian diet reduce the occurrence of diabetes? *Am J Public Health* 1985; 75:507-512.
129. Lipkin M, Uehara K, Winawer S, Sanchez A, Bauer C, Phillips R, Lynch HT, Blattner WA, Fraumeni JF: Seventh-day Adventist vegetarians have a quiescent proliferative activity in colonic mucosa. *Cancer Letter* 1985; 26:139-144.
130. Howie BJ, Shultz TD: Dietary and hormonal interrelationships among vegetarian Seventh-day Adventist and nonvegetarian men. *Am J Clin Nutr* 1985; 42:127-134.
131. Mack TM, Berkel J, Bernstein L, Mack W: Religion and Cancer in Los Angeles County. *Natl Ca Institute Monograph* 1985; 69:235-245.
132. Repace JL, Lowrey AH: A quantitative estimate of nonsmokers' lung cancer risk from passive smoking. *Environmental International* 1985;11:3-22.
133. Snowdon DA: Diet and ovarian cancer. Letter to the Editor. *JAMA* 1985; 254:356-357.
134. Register UD: The Seventh-day Adventist diet and lifestyle and the risk of major degenerative disease. In: *Frontiers in Longevity Research--Applications of Nutritional and Other Discoveries in the Prevention of the Age-Related Disorders* (Morin RJ, ed). Springfield, Illinois, 1985, Charles C. Thomas. pp 74-82.
135. Shultz TD, Leklem JE. Supplementation and Vitamin B-6 Metabolism. In: *Current Topics in Nutrition and Disease*. 1985; Vol. 13. Alan R Liss, New York.
136. Fenneb V: The Tromsø heart study: Coronary risk factors in Seventh-day Adventists. *Am J Epidemiol* 1985; 122:789-793.
137. FitzSimmons SC: Familial and environmental risk factors for elevated blood pressure in youth. Doctoral Dissertation in Epidemiology. University of California, Berkeley, 1985.
138. Ferguson LR, Alley PG, Gribben BM: DNA-damaging activity in ethanol-soluble fractions of feces from New Zealand groups at varying risks of colorectal cancer. *Nutr Cancer* 1985; 7:93-103.
139. Hirayama T. Mortality in Japanese with lifestyles similar to Seventh-day Adventists: a strategy for risk reduction by lifestyle modification. *Natl Cancer Inst Monogr* 1985;69:143-53.
140. Melby CL, Hyner GC, Zoog B. Blood pressure in vegetarians and non-vegetarians: a cross-sectional analysis. *Nutr Res* 1985;5:1077-82.
141. Linkosalo E, Ohtonen S, Markkanen H. Caries, peri-



- odontal status & some salivary factors in lactovegetarians. *Scand J Dent Res* 1985;93:304-8.
142. Stich HF, Hornby AP, Dunn BP: Beta-carotene levels in exfoliated mucosa cells of population groups at low and elevated risk of oral cancer. *Int J Cancer* 1986; 37:389-393.
143. Wulf HC, Iversen AS, Husum B, Niebuhr E: Very low sister-chromatid exchange rate in Seventh-day Adventists. *Mutat Res* 1986; 162:131-135.
144. Kuratsune M, Ikeda M, Hayashi T: Epidemiologic studies on possible health effects of intake of pyrolysates of foods, with reference to mortality among Japanese Seventh-day Adventists. *Environ Health Perspectives* 1986; 67:143-146.
145. Phillips RL, Snowdon DA: Mortality among Seventh-day Adventists in relation to dietary habits and lifestyle. In: *Plant Proteins: Application, Biologic Effect, and Chemistry* (Ory RL, ed). Washington DC, 1986, American Chemical Society. pp 162-174.
146. Calkins BM: The consumption of fiber in vegetarians and non-vegetarians. In: *Handbook of Dietary Fiber and Nutrition* (Spiller G, ed). Boca Raton, Florida, 1986, CRC Press, Inc. pp 407-414.
147. Fisher M, Levine PH, Weiner B, Ockene IS, Johnson B, Johnson MH, Natale AM, Vaudreuil CH, Hoogasian J: The effect of vegetarian diets on plasma lipid and platelet levels. *Arch Int Med* 1986;146:1193-7.
148. Mills PK: Dietary relationships to fatal breast cancer among Seventh-day Adventists. Ph.D. Dissertation, University of Texas, School of Public Health, 1986. (Available from University Microfilms International, Ann Arbor, Michigan.)
149. Chan JY: A viewpoint of a Seventh-day Adventist. *Aust Fam Physician* 1986;15(9):1154.
150. Fraser GE, Dysinger PW, Best C, Chan R: IHD risk factors in middle-aged Seventh-day Adventist men and their neighbors. *Am J Epidemiol* 1987;126:638-46.
151. Schultz TD, Leklem JE: Vitamin B6 status and bio-availability in vegetarian women. *Am J Clin Nutr* 1987;46:647-51.
152. Beilin LJ, Margetts BM: Vegetarian Diet and Blood Pressure. *Biblthca Cardiol* 1987;41:85-105.
153. Beilin LJ, Armstrong BK, Margetts BM, Rouse IL, Vandongen R: Vegetarian diet and blood pressure. *Nephron* 1987;47(Suppl 1):37-41.
154. Schultz TD, Wilcox RB, Spuehler JM, Howie BJ: Dietary and hormonal inter-relationships in premenopausal women: evidence for a relationship between dietary nutrients and plasma prolactin levels. *Am J Clin Nutr* 1987;46:905-11.
155. Ringstad J, Fenneb E V: The Tromsø Heart Study: Serum selenium in a low risk population for cardiovascular disease and cancer and matched controls. *Ann Clin Res* 1987; 19:351-4.
156. Scholfield DJ, Behall KM, Bhathena SJ, Kelsay J, Reiser S, Revett KR: A study on Asian Indian and American vegetarians: indications of a racial predisposition to glucose intolerance. *Am J Clin Nutr* 1987; 46:955-61.
157. Morgan JW: Case-control study of vitamin A intake and colorectal cancer in Seventh-day Adventists. Dissertation thesis, Loma Linda University. (submitted to University Microfilms)
158. King C: Factors associated with clinical gall bladder disease among Seventh-day Adventist women. Dissertation thesis, Loma Linda University, 1987.
159. Kissinger DG, Sanchez A: The association of dietary factors with the age of menarche. *Nutr Res* 1987; 7:471-479.
160. Sellers EEB: A prospective longitudinal study of psychosocial variables associated with the incidence of cancer among Seventh-day Adventists. Ph.D. Dissertation, University of Michigan, 1987. (Available from University Microfilms International, Ann Arbor, Michigan.)
161. Euler GL, Abbey DE, Magie AR, Hodgkin JE: Chronic obstructive pulmonary disease symptom effects of long-term cumulative exposure to ambient levels of total suspended particulates and sulfur dioxide in California Seventh-day Adventist residents. *Arch Environ Health*, July / August 1987; 42,4:213-222.
162. Hosken B. Adventists and Longevity. *RECORD*, January 16, 1988.
163. Linkosalo E. Lactovegetarian diet and dental Health. Dissertation 1988. Univ. of Kuopio, Finland.
164. Mills PK, Annegers JF, Phillips RL: Animal product consumption and subsequent fatal breast cancer risk among Seventh-day Adventists. *Am J Epidemiol* 1988; 127,3:440-453.
165. Fraser GE: Determinants of ischemic heart disease in Seventh-day Adventists: A review. *Am J Clin Nutr* 1988; 48:833-836.
166. Linkosalo E, Halonen P, Markkanen H. Factors related to dental health and some salivary factors in Finnish Seventh-day Adventists. *Proc Finn Dent Soc* 1988; 84:279-89.
167. Mills PK, Beeson WL, Abbey DE, Fraser GE, Phillips RL: Dietary habits and past medical history as related to fatal pancreas cancer risk among Adventists. *Cancer* 1988; 61:2578-85.
168. Linkosalo E, SyrjEnen S, Alakuijala P. Salivary composition and dental erosions in lacto-ovo-vegetarians. *Proc Finn Dent Soc* 1988;84:253-60.
169. Laidlaw SA, Shultz TD, Cecchino JT, Kopple JD. Plasma and urine taurine levels in vegans. *Am J Clin Nutr* 1988; 47:660-3.
170. Euler GL, Abbey DE, Hodgkin JE, Magie AR: Chronic obstructive pulmonary disease symptom effects of long-term cumulative exposure to ambient levels of total oxidants and nitrogen dioxide in California Seventh-day Adventist residents. *Arch Environ Health*, July / August 1988; 43,4:279-85.
171. Linkosalo E, Markkanen S, Alakuijala P. Effects of some commercial health beverages, effervescent vitamin C preparations and berries on human dental enamel. *Proc Finn Dent Soc* 1988;84:31-38.
172. Abbey DE, Euler GL, Moore JK, Petersen F, Hodgkin

- JE, Magie AR: Applications of a method for setting air quality standards based on epidemiological data. *JAPCA* 1989; 39:437-45.
173. Linkosalo E. Dietary habits and dental health in Finnish Seventh-day Adventists. *Proc Finn Dent Soc* 1988; 84:109-15.
174. Snowdon DA. Animal product consumption and mortality because of all causes combined, coronary heart disease, stroke, diabetes, and cancer in Seventh-day Adventists. *Am J Clin Nutr* 1988; 48:739-48.
175. Schultz TD, Rose DP. Effect of high-fat intake on lactogenic hormone bioactivity in premenopausal women. *Am J Clin Nutr* 1988; 48:791-4.
176. Beilin LJ, Rouse IL, Armstrong BK, Margetts BM, Vandongen R. Vegetarian diet and blood pressure levels: incidental or causal association? *Am J Clin Nutr* 1988; 48:806-10.
177. FennebE V. The Tromsø Heart Study: diet, religion, and risk factors for coronary heart disease. *Am J Clin Nutr* 1988; 48:826-9.
178. Marsh AG, Sanchez TV, Michelsen O, Chaffee FL, Fagal SM. Vegetarian lifestyle and bone mineral density. *Am J Clin Nutr* 1988; 48:837-41.
179. Tyllavsky FA, Anderson JJB. Dietary factors in bone health of elderly lacto-ovo-vegetarian and omnivorous women. *Am J Clin Nutr* 1988;48:842-9.
180. Hunt IF, Murphy NJ, Henderson C. Food and nutrient intake of Seventh-day Adventist women. 1988; *Am J Clin Nutr* 48:850-1.
181. Kelsay JL, Frazier CW, Prather ES, Canary JJ, Clark WM, Powell AS. Impact of variation in carbohydrate intake on mineral utilization by vegetarians. *Am J Clin Nutr* 1988; 48:875-9.
182. Ringstad J, FennebE V. The Tromsø Heart Study: Selenium in a low-risk population for cardio-vascular disease and cancer.(Abstract) *Am J Clin Nutr* 1988; 48:925.
183. Thomas EC. Consumption of sodium, iron, and zinc by vegan and lacto-ovo-vegetarian Seventh-day Adventist college students. (Abstract) *Am J Clin Nutr* 1988; 48:925.
184. Snowdon DA, Kane RL, Beeson W, Burke GL, Sprafka JM, Potter J, Iso H, Jacobs DR, Phillips RL. Is Early Natural Menopause a Biologic Marker of Health and Aging? *Am J Public Health* 1989; 79:709-14.
185. Kuzma JW, Lindsted KD: Determinants of long-term (24-year) diet recall ability using a 21-item food frequency questionnaire. *Nutr Cancer* 1989; 12:151-60.
186. Lindsted KD, Kuzma JW: Long-term (24-Year) Recall Reliability in Cancer Cases and Controls Using a 21-Item Food Frequency Questionnaire. *Nutr Cancer* 1989; 12:135-49.
187. Fraser GE, Babaali H. Determinants of High Density Lipoprotein Cholesterol in Middle-Aged Seventh-day Adventist Men and Their Neighbors. *Am J Epidemiol* 1989; 130:958-65.
188. Beeson WL, Mills PK, Phillips RL, Andress M, Fraser GE. Chronic Disease Among Seventh-day Adventists, A Low-Risk Group. *Cancer* 1989;64:570-81.
189. Mills PK, Beeson WL, Phillips RL, Fraser GE. Dietary Habits and Breast Cancer Incidence Among Seventh-day Adventists. *Cancer* 1989; 64:582-90.
190. Mills PK, Beeson WL, Phillips RL, Fraser GE. Prospective Study of Exogenous Hormone Use and Breast Cancer in Seventh-day Adventists. *Cancer* 1989; 64:591-7.
191. Mills PK, Beeson WL, Phillips RL, Fraser GE. Cohort Study of Diet, Lifestyle, and Prostate Cancer in Adventist Men. *Cancer* 1989; 64:598-604.
192. Sabat1-Casellas J. Anthropometric Parameters in Public School Students and Seventh-day Adventist Vegetarian and Meat-eating Students. DrPH Dissertation, Loma Linda University, 1989. (Available from University Microfilms Inter-national, Ann Arbor, Michigan.)
193. Mills PK, Preston-Martin S, Annegers JF, Beeson WL, Phillips RL, Fraser GE. Risk Factors for Tumors of the Brain and Cranial Meninges in Seventh-day Adventists. *Neuroepidemiology* 1989; 8:266-75.
194. Hunt IF, Murphy NJ, Henderson C, Clark VA, Jacobs RM, Johnston PK, Coulson AH. Bone mineral content in postmenopausal women: comparison of omnivores and vegetarians. *Am J Clin Nutr* 1989; 50:517-23. t
195. Lombard KA and Mock DM. Biotin nutritional status of vegans, lacto-ovo vegetarians, and non-vegetarians. *Am J Clin Nutr* 1989; 50:486-90.
196. Nieman DC, Sherman KM, Arabatzis K, Underwood BC, Barbosa JC, Johnson M, Shultz TD, Lee J. Hematological, Anthropometric, and Metabolic Comparisons Between Vegetarian and Nonvegetarian Elderly Women. *Int J Sports Med* 1989; 10:243-51.
197. Nieman DC, Underwood BC, Sherman KM, Arabatzis K, Barbosa JC, Shultz TD. Dietary status of Seventh-day Adventist vegetarian and non-vegetarian elderly women. *J Am Diet Assoc* 1989; 89:1763-1769.
198. Marsh AG, Christensen DK, Sanchez TV, Mickelsen O, Chaffee FL. Nutrient similarities and differences of older lacto-ovo-vegetarian and omnivorous women. *Nutr Rep Int* 1989; 39:19-24.
199. Melby CL, Goldflies DG, Hyner GC, Lyle RM. Relation between vegetarian/nonvegetarian diets and blood pressure in back and white adults. *Am J Public Health* 1989; 79:1283-8.
200. Beeson WL, Fraser GE, Mills PK. Validation of record linkage to 2 California population-based tumor registries in a cohort study. Proceedings of the 1989 public health conference on records and statistics. DHHS publication No.(PHS)90-1214,1990, pp.196-201.
201. Ross JK, Pusateri DJ, Shultz TD. Dietary and hormonal evaluation of men at different risks for prostate cancer: fiber intake, excretion, and composition, with in vitro evidence for an association between steroid hormones and specific fiber components. *Am J Clin Nutr* 1990; 51:365-70.
202. Pusateri DJ, Roth WT, Ross JK, Shultz TD. Dietary and

- hormonal evaluation of men at different risks for prostate cancer: plasma and fecal hormone-nutrient interrelationships. *Am J Clin Nutr* 1990;51: 371-7.
203. Snowdon DA. Early Natural Menopause and the Duration of Postmenopausal Life. *J Am Geriatr Soc* 1990; 38:402-8.
204. Fraser GE, Phillips RL, Beeson WL. Hypertension, anti-hypertensive medication and risk of renal carcinoma in California Seventh-day Adventists. *Int J Epidemiol* 1990; 19(4):832-8.
205. Hopkins RJ, Russell RG, O'Donnoghue M, Wasserman S, Lefkowitz A, Morris JG. Seroprevalence of *Helicobacter pylori* in SDA and other groups in Maryland. *Arch Int Med* 1990; 150: 2347-8.
206. Mills PK, Newell GR, Beeson WL, Fraser GE, Phillips RL. History of Cigarette Smoking and Risk of Leukemia and Myeloma: Results from the Adventist Health Study. *J Natl Cancer Inst* 1990; 82:1832-6.
207. Sumbureru D. The influence of lifestyle on longevity among black Seventh-day Adventists in California: An epidemiologic approach. DrPH Dissertation, Loma Linda University, 1988. (Available from University Microfilms International, Ann Arbor, Michigan.)
208. Sabat1 J, Lindsted KD, Harris RD, Johnston PK. Anthropometric parameters of school-children with different life-styles. *Am J Dis Children* 1990; 144:1159-63.
209. Barbosa JC, Shultz TD, Filley SJ, Nieman DC. The relationship among adiposity, diet, and hormone concentrations in vegetarian and nonvegetarian post-meno-pausal women. *Am J Clin Nutr* 1990;51:798-803.
210. Lindsted K, Kuzma JW. Husband-wife concordance and changes in dietary practices by surviving spouses of cancer cases. *Nutr Cancer* 1990;13:175-87.
211. Murphy FG, Blumenthal DS, Dickson-Smith J, Peay RP. The mortality profile of black Seventh-day Adventists residing in metropolitan Atlanta: a pilot study. *Am J Public Health* 1990; 80:984-5.
212. Mills PK, Beeson WL, Phillips RL, Fraser GE. Bladder cancer in a low risk population: Results from the Adventist Health Study. *Am J Epidemiol* 1991; 133:230-9.
213. Resnicow K, Barone J, Engle A, Miller S, Haley N, Fleming D, Wynder, E. Diet and serum lipids in vegan vegetarians: A model for risk reduction. *J Am Diet Assoc* 1991; 91:447-53.
214. Lindsted KD, Tonstad S, Kuzma JW. Self-report of physical activity and patterns of mortality in Seventh-day Adventist men. *J Clin Epidemiol* 1991; 44:355-64.
215. Lindsted K, Tonstad S. Body mass index and patterns of mortality among Seventh-day Adventist men. *Int J Obesity* 1991;15:397-406.
216. Fraser GE, Beeson WL, Phillips RL. Diet and lung cancer in California Seventh-day Adventists. *Am J Epidemiol* 1991; 133:683-93.
217. Ullman D, Phillips RL, Beeson WL, Dewey HG, Brin BN, Kuzma JW, Mathews CP, Hirst AE. Cause-specific mortality among physicians with differing life-styles. *JAMA* 1991; 265:2352-9.
218. Sabat1 J, Lindsted KD, Harris RD, Sanchez A. Attained height of lacto-ovo vegetarian children and adolescents. *Eur J Clin Nutr* 1991; 45:51-8.
219. FennebE V, Helseth A. Cancer Incidence in Norwegian Seventh-day Adventists 1961 to 1986. *Cancer* 1991; 68:666-71.
220. Abbey DE, Mills PK, Petersen FF, Beeson WL. Long-term Ambient Concentrations of Total Suspended Particulates and Oxidants as Related to Incidence of Chronic Disease in California Seventh-day Adventists. *Environ Health Perspectives* 1991; 94:43-50.
221. Mills PK, Abbey D, Beeson WL, Petersen F. Ambient Air Pollution and Cancer in California Seventh-day Adventists. *Arch Environ Health* 1991; 46:271-280.
222. Melby CL, Goldflies DG, Hymer GC. Blood Pressure and Anthropometric differences in regularly exercising and nonexercising black adults. *Clin & Exper Hyper-Theory & Practice* 1991; 6:1233-48.
223. Editorial. Comparative mortality of two college groups, 1945-1983. *MMWR* 1991; 40:579-82.
224. Kurata JH, Nogawa AN, Abbey DE, Petersen F. A Prospective Study of Risk for Peptic Ulcer Disease in Seventh-Day Adventists. *Gastro-enterology* 1992; 102:902-9.
225. Persky VW, Chatterton RT, Van Horn LV, Grant MD, Langenberg P, Marvin J. Hormone levels in vegetarian and nonvegetarian teenage girls: Potential implications for breast cancer risk. *Cancer Research* 1992;52:578-83.
226. Fraser GE, Sabat1 J, Beeson WL, Strahan TM. A Possible Protective Effect of Nut Consumption on Risk of Coronary Heart Disease. The Adventist Health Study. *Arch Int Med* 1992; 152:1416-24.
227. Fraser GE, Strahan, TM, Sabat1 J, Beeson WL, Kissinger D. Effects of Traditional Coronary Risk Factors on Rates of Incident Coronary Events in a Low Risk Population: The Adventist Health Study. *Circulation* 1992; 86:406-13.
228. Mills PK, Beeson WL, Fraser GE, Phillips RL. Allergy and cancer: Organ site-specific results from the Adventist Health Study. *Am J Epidemiol* 1992; 136:287-95.
229. FennebE V. Mortality in Norwegian Seventh-day Adventists 1962-1986. *J Clin Epidemiol* 45:157-167, 1992.
230. FennebE V. Coronary risk factors in Norwegian Seventh-day Adventists: A study of 247 Seventh-day Adventists and matched controls. *Am J Epidemiol* 1992; 135:504-8.
231. Sabat1 J, Llorca C, Sanchez A. Lower height of lacto-ovo-vegetarian girls at preadolescence: An indicator of physical maturation delay? *J Am Diet Assoc* 1992; 92:1263-4.
232. Lindsted KD, Kuzma JW, Anderson JL. Coffee consumption and cause-specific mortality. *J Clin Epidemiol* 1992;45:733-42.
233. Gien P, Beeson WL, Fraser GE. The Incidence of Dementia and Intake of Animal Products: Preliminary Findings from the Adventist Health Study. *Neuroepidemiology* 1993; 12:28-36.
234. Abbey DE, Petersen F, Mills PK, Beeson WL. Long-term ambient concentrations of total suspended particulates,

- ozone, and sulfur dioxide and respiratory symptoms in a nonsmoking population. *Arch Environ Health* 1993; 48:33-46.
235. Melby CL, Goldflies DG, Toohey ML. Blood Pressure Differences in Older Black and White Long-Term Vegetarians and Nonvegetarians. *J Am Coll Nutr* 1993; 12:262-9.
236. Sabat1 J. Does nut consumption protect against ischaemic heart disease? *Eur J Clin Nutr* 1993; 47:S71-S75.
237. Sabat1 J, Fraser GE. The probable role of nuts in preventing coronary heart disease. *Primary Cardiology* 1993;19:65-72.
238. Richter A, Yang K, Richter F, Lynch HT, Lipkin M. Morphological and morphometric measurements in colorectal mucosa of subjects at increased risk for colonic neoplasia. *Cancer Letters* 1993; 74:65-8.
239. Sorkin JD, Muller D, Andres R. Body mass index and mortality in Seventh-day Adventist men. A critique and re-analysis. *Int J Obesity* 1994; 18:752-4.
240. Reed JA, Anderson JJB, Tyllavsky FA, Gallagher PH, Jr. Comparative changes in radial-bone density of elderly female lactoovo vegetarians and omnivores. *Am J Clin Nutr* 1994; 59:1197S-202S.
241. Melby CL, Toohey ML, Cebrick J. Blood pressure and blood lipids among vegetarian, semivegetarian, and nonvegetarian African Americans. *Am J Clin Nutr* 1994;59:103-9.
242. Fraser GE. Diet and coronary heart disease: beyond dietary fats and low-density-lipoprotein cholesterol. *Am J Clin Nutr* 1994;59:1117S-23S.
243. Sabat1 J, Fraser GE. Nuts: a new protective food against coronary heart disease. *Current Opinion in Lipidology* 1994;5:11-16.
244. Mills PK, Beeson WL, Phillips RL, Fraser GE. Cancer incidence among California Seventh-day Adventists, 1976-1982. *Am J Clin Nutr* 1994;59:1136S-42S.
245. Knutsen SF. Lifestyle and the use of health services. *Am J Clin Nutr* 1994;59:1171S-75S.
246. FEnnebE V. The healthy Seventh-day Adventist lifestyle: what is the Norwegian experience? *Am J Clin Nutr* 1994;59:1124S-9S.
247. Kuczmarski RJ, Anderson JJ, Koch GG. Correlates of blood pressure in Seventh-day Adventist (SDA) and non-SDA adolescents. *J Am Coll Nutr* 1994;13:165-73.
248. Beilin LJ. Vegetarian and other complex diets, fats, fiber, and hypertension. *Am J Clin Nutr* 1994;59:1130S-5S.
249. Abbey DE, Hwang BL, Burchette RJ, VanCuren T, Mills PK. Estimated Long-term Ambient Concentrations of PM10 and Development of Respiratory Symptoms in a Nonsmoking Population. *Arch Environ Hlth* 1995; 50(2):139-52.
250. Abbey DE, Lebowitz MD, Mills PK, Petersen FF, Beeson WL, Burchette , RJ. Long-term ambient concentrations of particulates and oxidants and development of chronic disease in a cohort of non-smoking California residents. *Inhalat Toxicol* 1995;7:19-34.
251. Morgan JW and Singh PN. Diet, Body Mass Index, and Colonic Epithelial Cell Proliferation in a Healthy Population. *Nutr Cancer* 1995;23:247-257.
252. Fraser GE, Lindsted KD, Beeson WL. Effect of Risk Factor Values on Lifetime Risk of and Age at First Coronary Event. *Am J Epidemiol* 1995; 142:746-58.
253. Persky V, Van Horn L. Epidemiology of soy and cancer: Perspectives and directions. *J Nutr* 1995; 125:709S-12S.
254. Toohey L, Harris MA, Allen KGD, Melby CL. Plasma ascorbic acid concentrations are related to cardiovascular risk factors in African-Americans. *J Nutr* 1996; 126:121-8.
255. McAnulty J, Scragg R. Body mass index and cardiovascular risk factors in Pacific Island Polynesian and Europeans in New Zealand. *Ethn Health* 1996; 3:187-95.
256. Sabat1 J, Bell HET, Fraser GE. Nut consumption and coronary heart disease risk. In *Lipids in Human Nutrition*. CRC Press, New York, 1996 (Gene A. Spiller, Ed).
257. Hunter DJ, Spiegelman D, Adami HO, Beeson L, Van Den Brandt PA, Folsom AR, Fraser GE, Goldbohm A, Graham S, Howe GR, Kushi LH, Marshall JR, McDermott A, Miller AB, Speizer FE, Wolk A, Yaun SS, Willet W. Cohort studies of fat intake and the risk of breast cancer - A pooled analysis. *NEJM* 1996;334:356-61.
258. Lindsted KD, Fraser GE, Steinkohl M, Beeson WL. Healthy Volunteer Effect in a Cohort Study: Temporal Resolution in the Adventist Health Study. *J Clin Epidemiol* 1996; 49:783-90.
259. Collaborative Group on Hormonal Factors in Breast Cancer. Breast cancer and hormonal contraceptives: collaborative reanalysis of individual data on 53,297 women with breast cancer and 100,239 women without breast cancer from 54 epidemiological studies. *Lancet* 1996;347:1713-28.
260. Singh PN, Tonstad S, Abbey DE, Fraser GE. Validity of selected physical activity questions in white Seventh-day Adventists and non-Adventists. *Med & Science in Sports & Exercise* 1996;28:1026-36.
261. Fraser GE, Singh PN, Bennett H. Variables associated with cognitive function in elderly California Seventh-day Adventists. *Am J Epidemiol* 1996; 143:1181-90.
262. Collaborative Group on Hormonal Factors in Breast Cancer. Breast cancer and hormonal contraceptives: Further Results. *Contraception* 1996;54:1S-106S.
263. Pribi\_ P. Association between nutrient intake and risk of coronary heart disease in California Seventh-day Adventists. DrPH Dissertation, Loma Linda University, 1996. (Available from University Microfilms International, Ann Arbor, Michigan).
264. Fraser GE, Sumbureru D, Pribis P, Neil RL, Frankson MAC. Association among health habits, risk factors, and all-cause mortality in a black California population. *Epidemiology* 1997;8:168-74.



265. Lindsted KD, Singh PN. Body Mass and 26-Year Risk of Mortality among Women who never Smoked: Findings from the Adventist Mortality Study. *Am J Epidemiol* 1997;146:1-11.
266. Fraser GE, Shavlik D. Risk factors, lifetime risk, and age at onset of breast cancer. *Ann Epidemiol* 1997;7:375-82.
267. Fraser GE, Haller-Wade TM, Morrow S. Social support in Seventh-day Adventists and their neighbors. *J Religion & Health* 1997;36:231-9.
268. Fraser GE, Shavlik DJ. Risk factors for all-cause and coronary heart disease mortality in the oldest-old. *Arch Intern Med* 1997;157:2249-2258.
269. Collaborative Group on Hormonal Factors in Breast Cancer. Breast cancer and hormone replacement therapy: collaborative reanalysis of data from 51 epidemiological studies of 52,705 women with breast cancer and 108,411 women without breast cancer. *Lancet* 1997;350:1047-59.
270. Hopkins GL. An AIDS risk appraisal of students attending Seventh-day Adventist high schools in the United States and Canada. DrPH Dissertation, Loma Linda University, 1997. (Available from University Microfilms International, Ann Arbor, Michigan).
271. Murphy FG, Gwebu E, Braithwaite RL, Green-Goodman D, Brown L. Health values and practices among Seventh-day Adventist. *Am J Health Behav* 1997; 21(1):43-50.
272. Key TJ, Fraser GE, Thorogood M, Appleby PN, Beral V, Reeves G, Burr ML, Chang-Claude J, Frentzel-Beyme R, Kuzma JW, Mann J, McPherson K. Mortality in vegetarians and non-vegetarians: a collaborative analysis of 8,300 deaths among 76,000 men and women in five prospective studies. *Public Health Nutr* 1998;1:33-41.
273. Singh PN, Lindsted KD. Body Mass and 26-Year Risk of Mortality from Specific Diseases among Women who Never Smoked. *Epidemiology* 1998;9:246-54.
274. Singh PN, Fraser GE. Dietary risk factors for colon cancer in a low-risk population. *Am J Epidemiol* 1998;148:761-74.
275. Famodu AA, Osilesi O, Makinde YO, Osonuga OA. Blood pressure and blood lipid levels among vegetarian, semi-vegetarian, and non-vegetarian native Africans. *Clin Biochem* 1998; 31:545-9.
276. Lindsted KD, Singh PN. Body mass and 26y risk of mortality among men who never smoked: a re-analysis among men from the Adventist Mortality Study. *Int J Obes Relat Metab Disord* 1998; 22:544-8.
277. Harman SK, Parnell WR. The nutritional health of New Zealand vegetarian and non-vegetarian Seventh-day Adventists: selected vitamin, mineral and lipid levels. *NZ Med J* 1998; 111:91-4.
278. Hopkins GL, Hopp JW, Marshak HP, Neish C, Rhoads G. AIDS risk among students attending Seventh-day Adventist school, in North America. *J Sch Health* 1998; 68:141-5.
279. Fraser GE, Lindsted KD, Knutsen SF, Beeson WL, Bennett H, Shavlik DJ. The validity of dietary recall over twenty years in California Seventh-day Adventists. *Am J Epidemiol* 1998;148:810-18.
280. Jacobsen BK, Knutsen SF, Fraser GE. Does high soy milk intake reduce prostate cancer incidence? The Adventist Health Study. *Cancer Causes & Control* 1998;9:553-7.
281. Hopkins GL, Hopp JW, Marshak HH, Neish C, Rhoads G. An AIDS-risk assessment of Students attending Christian high schools in the United States of America: A practical application of the theory of planned behavior. *J Res Christian Educ* 1998;7:91-120.
282. Beeson WL, Abbey DE, Knutsen SF. Long-term concentrations of ambient air pollutants and incident lung cancer in California adults: Results from the AHSMOG study. *Environ Health Perspect* 1998; 106:813-23.
283. Toohey ML, Harris MA, Williams DW, Foster G, Schmidt DW, Melby CL. Cardiovascular disease risk factors are lower in African-American vegans compared to lacto-ovo-vegetarians. *J Am Coll Nutr* 1998;17:425-34.
284. Fraser GE, Shavlik DJ. The estimation of lifetime risk and average age at onset of a disease using a multivariate exponential hazard rate model. *Statistics in Medicine* 1999;18:397-410.
285. Jacobsen BK, Knutsen SF, Fraser GE. Age at natural menopause and total mortality and mortality from Ischemic Heart Disease: The Adventist Health Study. *J Clin Epidemiol* 1999;52:303-7.
286. Fraser GE. Nut consumption, lipids, and risk of a coronary event. *Clin Cardiol* 1999;22 (Suppl III)III-11-III-15.
287. Sabat J. Nut consumption, vegetarian diets, ischemic heart disease risk, and all-cause mortality: evidence from epidemiologic studies. *Am J Clin Nutr* 1999; 70(suppl):500S-3S.
288. Key TJ, Fraser GE, Thorogood M, Appleby PN, Beral V, Reeves G, Burr ML, Chang-Claude J, Frentzel-Beyme R, Kuzma JW, Mann J, McPherson K. Mortality in vegetarians and nonvegetarians: detailed findings from a collaborative analysis of 5 prospective studies. *Am J Clin Nutr* 1999;70(suppl):516S-24S.
289. Fraser GE. Associations between diet and cancer, ischemic heart disease, and all-cause mortality in non-Hispanic white California Seventh-day Adventists. *Am J Clin Nutr* 1999;70(suppl):532S-8S.
290. Hokin BC, Butler T. Cyanocobalamin (vitamin B-12) status in Seventh-day Adventist ministers in Australia. *Am J Clin Nutr* 1999;70(suppl):576S-8S.
291. Singh PN, Lindsted KD, Fraser GE. Body weight and mortality among adults who never smoked. *Am J Epidemiol* 1999;150:1152-64.
292. Fraser GE. Diet as Primordial Prevention in Seventh-day Adventists. *Preventive Medicine* 1999;29 (Suppl.):S18-S23.
293. Key TJ, Davey GK, Appleby PN. Health benefits of a vegetarian diet. *Proceedings of the Nutrition Soc.* 1999; 58:271-5.
294. Park JS, Oh SJ, Kim KS, Ahn SH, Kim YK. Effect of diet and apolipoprotein E (Apo E) polymorphism on the variation of serum lipid profile in Korean males. (written

- in Korean). Korean Circulation Journal 1999; 29:266-75.
295. Famodu AA, Osilesi O, Makinde YO, Osonuga OA, Fakoya TA, Ogunyemi EO, Egbenekhuere IE. The influence of a vegetarian diet on haemostatic risk factors for cardiovascular disease in Africans. *Thromb Res* 1999; 95:31-6.
296. van den Brandt PA, Spiegelman D, Yaun S-S, Adami H-O, Beeson L, Folsom AR, Fraser G, Goldbohm RA, Graham S, Kushi L, Marshall JR, Miller AB, Rohan T, Smith-Warner SA, Speizer FE, Willett WC, Wolk A, Hunter DJ. A pooled analysis of prospective cohort studies on height, weight and breast cancer risk. *Am J Epidemiol* 2000; 152:514-27.
297. Myint T, Fraser GE, Lindsted KD, Knutsen SF, Hubbard RW, Bennett HW. Urinary 1-methyl histidine is a marker of meat consumption in black and white California Seventh-day Adventists. *Am J Epidemiol* 2000;152:752-5.
298. Singh PN, Fraser GE, Knutsen SF, Lindsted KD, Bennett HW. Validity of a physical activity questionnaire among African-American Seventh-day Adventists. *Med & Science in Sports & Exercise* 2001;33:468-75.
299. Smith-Warner SA, Spiegelman D, Adami HO, Beeson WL, van den Brandt PA, Folsom AR, Fraser GE, Freudenheim JL, Goldbohm RA, Graham S, Kushi L, JH, Miller AB, Rohan TE, TE, Speizer FE, Toniolo P, Willett WC, Wolk A, Zeleniuch-Jacquotte A, Hunter DJ. Types of Dietary Fat and Breast Cancer: A Pooled Analysis of Cohort Studies. *Int J Cancer* 2001;92:767-74.
300. Smith-Warner SA, Spiegelman D, Yaun SS, Adami HO, Beeson WL, van den Brandt PA, Folsom AR, Fraser GE, Freudenheim JL, Goldbohm RA, Graham S, Miller AB, Potter JD, Rohan TE, Speizer FE, Toniolo P, Willett WC, Wolk A, Zeleniuch-Jacquotte A, Hunter DJ. Intake of Fruits and Vegetables and Breast Cancer: A Pooled Analysis of Cohort Studies. *JAMA* 2001;285:769-76.
301. Fraser GE, Shavlik DJ. Yen years of life. Is it a matter of choice? *Arch Int Med* 2001;161:1645-52.
302. Knutsen SF, Fraser GE, Lindsted KD, Beeson WL, Shavlik DJ. Validation of assessment of nutrient intake. Comparing biological measurements of Vitamin C, Folate, Alpha-tocopherol and Carotene with 24-hour dietary recall information in non-Hispanic blacks and whites. *Annals Epidemiol* 2001 (in press).