



## Creating Health History

It is with great pleasure and gratitude that I write to you, the very special 40,000 Adventist members who have already become part of AHS-2.

Collectively your efforts with the questionnaire represent at least 100,000 hours of time. We are very fortunate to have such an interested and helpful group of members. You make possible an extraordinary gain in knowledge about diet and cancer.

So you have completed your questionnaire. What is your future role in the study? Let me briefly tell you about some of our future plans. See also page 7.

The questionnaire is the first half of the essential information that we need—it is by far the most complicated and time-consuming part. You have told us how you eat and exercise and some facts of your past medical history. The other essential information that we need pertains to your health experience in the years after you enroll in AHS-2. In particular, any new cancers or heart attacks that you experience. Only then can we relate your lifestyle to the risk of these unfortunately common health problems.

We will gather much of this information about new cancers using the computer to match against state and national records. However, occasionally we may need to review a recent hospitalization record. Of course, we will need your permission. So every two years, you will receive a short two-page form on which to report any recent hospitalizations.

The first such form will be sent in a



Dr. Gary Fraser, Principal Investigator

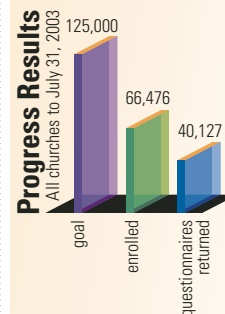
few weeks. If we do later ask to review the record of a hospitalization, be assured that we understand the sensitive nature of medical records. As a practicing physician I guarantee it the same respect and confidentiality that I afford the records of any patient in my medical practice.

Hopefully, we will have reached our enrollment goal of 125,000 by the end of the first 5 years (still 3 years away). But this is just the beginning! A study like this has the potential to find health answers for decades to come. So what you, and we at Loma Linda, have started is quite a grand endeavor that should still be thriving long after my retirement! I hope that you will find membership in AHS-2 a positive and satisfying experience. We very much look forward to our partnership with you in this research over many years. You will make a difference.

With many thanks,  
Gary E. Fraser, MD, PhD  
*Principal Investigator*

### Over the 40,000 Mark!

As of July 31, 2003 the AHS-2 office had received 40,127 completed questionnaires. Another 26,000 questionnaires have been distributed. Researchers are hopeful that all questionnaires can be completed and returned because each person contributes valuable data to the study.



### The First Annual Newsletter

This is the first annual newsletter and report from AHS-2. Every year during the course of the study, you, the participants will be the first to receive the report. We trust you find it informative and we welcome your comments. Pass the newsletter on to others—it may encourage them to join.

It will also be posted on our web page:  
[adventisthealthstudy.org](http://adventisthealthstudy.org)

# Did you know...

... that the earlier Adventist Health Studies (1960 and 1976) were the first studies to discover many relationships between diet and disease?



**Did you know** that the earlier Adventist Health Studies were among the first to discover that eating fruit and vegetables reduced the risk of cancer?

## Recruitment Plans 2002-2005

The big challenge in the first four years of the study is to sign-up members and collect 125,000 questionnaires. There are two strategies. One is advertising in church papers and on TV. However, the major strategy is a roll out of the study across the country conference-by-conference and church-by-church. Each church is asked to conduct a focused promotion over a 12-week period.

Sign-up of members started in California in February 2002. We are now recruiting in the Lake Union and shall begin in the Southern States during 2004.

At our AHS-2 office there are two recruitment teams. The one for Black/African American churches has a goal of 45,000 and is led by Dr. Patti Herring.

The other team led by Dr. Terry Butler works with all the other English-speaking churches and has a goal of 80,000 returned questionnaires. Although major promotion for the Pacific, North Pacific and Mid-American Unions has taken place, we plan to revisit these conferences as many churches had delayed promotion.

Union	Goal	Start of main promotion
Pacific	28,412	February 2002
North Pacific	15,741	September 2002
Mid-America	10,015	January 2003
Lake	11,990	August 2003
Atlantic	13,144	September 2003
Columbia	17,349	January 2004
Southern	28,696	January 2004
Southwestern	10,194	March 2004



Some of the AHS-2 staff at Loma Linda

### 50 Working At The AHS-2 Office

At present there are over 50 full-time or part time employees in AHS-2. It is a large operation.

There are 10 senior researchers, 4 programmers, several research associates, nutritionists, data technicians, scanner operators, telephonists and a number of special teams to care for the various aspects of the study.

The Processing Center distributes all the enrollment supplies, mails and receives, records and stores all the questionnaires. The two recruitment teams maintain contact with all the pastors, churches and local coordinators. At times one research associate may have 300 churches in various stages of promotion. Other teams are preparing for additional sub-studies.

Data management, quality control, and data processing are other very important functions. A large electronic scanner very accurately reads more than 2000 data fields (possible answers) in each questionnaire and translates your responses to a computer file. The computer informs us of important missing data and a telephonist may contact you if these are important omissions. Thus there is a great deal of work that goes on controlling the quality of the data that we will finally use.



### It's Not Too Late!

If you know of members who have the questionnaire but haven't returned it, tell them that it's not too late. And it's not too late for others to enroll.

Dr. Fraser says, "While there is no immediate deadline, the sooner the questionnaires are returned the better." "But we don't want anyone to miss out, and we will continue to enroll members through 2005."

**Did you know** that Adventist Health Study-1 was the first to discover that whole wheat bread reduced the risk of heart disease? Eating whole wheat bread instead of white bread reduced nonfatal heart attack risk by about 45%.



**Did you know** that Adventist Health Study-1 was the first to discover that eating nuts reduced the risk of heart disease? Those who ate nuts 5 or more times a week had 50% less risk of heart attack than those who ate nuts less than once a week.

## 222 Churches Reach Goal

**C**ongratulations to the 222 churches that, as of July 31 2003, have achieved 100% or more of their goal of returned questionnaires.

Another 330 churches have between 75%-99% of goal. These data only include churches in the Pacific, North Pacific and Mid America Unions where major promotion efforts have taken place.



Check out the web page, [www.adventisthealthstudy.org](http://www.adventisthealthstudy.org) for a complete listing of churches and their current progress.

Smaller sized churches, with goals less than 25, have generally done better than larger churches. Churches are challenged to have 24% of their members involved in the study. The 24% of membership goal was based on participation rates in an earlier pilot study. Anything you can do to help your church meet its goal, such as encouraging or helping a fellow member complete their questionnaire, would be great.

### Age No Barrier

Our oldest person in the study is a 110-year-old great-great grandmother. She is the 39th oldest person in the world. So far there have been ten members over the age of 100 and another 386 over 90 years who have completed questionnaires.

All age groups are well represented. There are 1,752 in the younger 30-39 year group. The average age is 61.

## Prominent Professors Confer With Research Team

**A**HS-2 is fortunate to have seven distinguished professors from leading academic institutions around the country as a part of the consulting team. These people readily share their research experience and expertise to assist Adventist Health Study-2.

The consultants committee meets formally once a year to review progress and make recommendations. These researchers value the contributions made



Consultant committee October 2002

by the previous Adventist Health Studies and recognize the potential of the new study to make new discoveries in health.

Dr. Ross (University of Southern California), Dr. Paffenbarger (Stanford University) and Dr. Austin (Oregon Health Science University) have served on this committee for more than twenty years. The others are Dr. Kolonel (University of Hawaii at Manoa), Dr. Kushi (Division of Research, Kaiser Permanente), Dr. Willett (Harvard School of Public Health) and Dr. Preston-Martin (University of Southern California) who is also a key investigator for the study.

There is also another eminent consulting group that assists with the Black/African American component.



### Some Questions Missed

Dr. Larry Beeson, in charge of the data quality control, says, "In a large questionnaire it is easy for people to miss answering questions. Sometimes two pages are turned together and whole pages are missed out." In that case or if important questions are left blank, an AHS-2 representative will contact you by mail or telephone to complete the missing information.

Dr. Beeson encourages everyone to double check that all questions are answered before mailing back the questionnaire.



*“Long term studies like the Adventist study are really the only way we can fully understand how diet will impact our health in the long term, in particular, how we can reduce our risk of cancer.”*

Dr. Walter Willett, Director, Nurses' Health Study, Harvard University

### **AHS-2 NUMBERS**

**4,300**

Number of churches participating in the study

**850**

Number of those churches that have so far promoted the study

**594**

Number of questions in the survey

**219**

Number of questions in the 1976 survey

**198**

Number of questions in the 1960 survey

**320**

Number of articles on studies of Adventist Health published in scientific journals

**396**

Number of persons over 90 years of age who have completed the questionnaire

**44%**

Percentage of subjects who never eat meat

**17%**

Percentage of subjects who have smoked in the past

**50%**

Percentage of subjects who drink soy or rice milk

## **Squashing the Myths**

**T**here is the misperception among some members that AHS-2 wants to compare Adventists with non-Adventists and show how Adventists live longer and have less disease. Not so! Earlier studies showed that, but this study is different.

This new study, AHS-2, aims to discover answers to the vexing questions about the role of particular foods and nutrients in the diet and their role in disease—particularly cancer and heart disease and eventually many other health outcomes.



Secondly, some people have said, “I’m not good enough, I’ll spoil the results.” Not so! Help us explode this myth. We want people to come just as they are - we are not looking for the so-called “Perfect Adventist”.

You will notice from the preliminary results (see snapshots) that there are large differences in what people eat. Actually, it is this range in diet and lifestyle that gives strength to the study.

So please encourage all Adventists, no matter what their background or health status or lifestyle, to join the study. All are needed. And remember, responses are confidential.

## **Your Privacy Matters**

**T**he privacy and confidentiality of the personal information that you share with the AHS-2 research is something that we take very seriously. As we have explained in other documents, there are strict protocols to protect this

information. Since starting research 40 years ago, the Adventist Health Study has maintained a perfect record in the security of private data.

### **Certificate of Confidentiality Granted**

To help us protect your privacy, the National Institutes of Health has given AHS-2 a Certificate of Confidentiality. This means that “researchers cannot be forced to disclose information that may identify you, even by a court subpoena, in any federal, state, or local civil, criminal, administrative, legislative or other proceedings”.

This is your guarantee. Only you, by written consent, can allow any of your personal information that we hold to be released to an insurer, employer or other person.

## **Recruitment Strategies that Work**

**I**s it possible to reach or exceed your church’s goal? When Yvon Liss of Stevensville, MT was asked how she reached 138% of her church’s goal, her response was that she just “kept after ‘em.” That personal touch is very important.

Bob Kershner of Meridian, ID with 120% reminded people by putting progress report numbers in the bulletin for 13 weeks in a row. Don’t underestimate what your congregation is capable of achieving with a little extra motivation. Brenda Warkentin, who got 160% of her goal at Tehachapi, Southern CA, decided her goal was too low and so did not give her members a goal. She just tried to get as many returns as possible.

## Everyone Enroll One

Is there a spouse or a grandpa in your house who has not joined? Invite them to join. Dr. Susanne Montgomery, AHS-2 Co-Investigator, says, "The personal invitation is by far the best approach. If every member could enroll another member we would soon reach our goal."



## 11,000 Missing Questionnaires?

Well not really missing. But if all the questionnaires we sent out more than 3 months ago were returned we would be over 50% of our goal. Perhaps they are on bedside tables or buried in the pile of important papers on the desk. If you know of someone who has yet to return a questionnaire could you give him/her a gentle reminder - we do need your spouse/friend in the study.

## Snapshots of First Results

Here is a quick look at some of the early descriptive results of the first 21,329 participants. We only show a few examples. There is much more that we will share with you in the future.

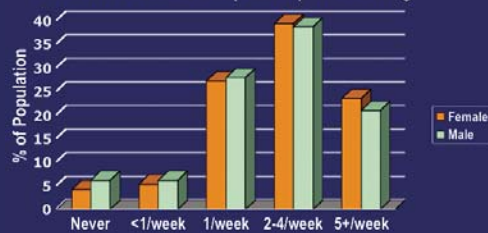
Some of the frequency patterns may change as more members join the study from different parts of the country. From time to time we will update results on our

web page—[adventisthealthstudy.org](http://adventisthealthstudy.org)

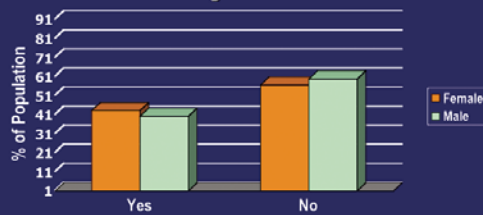
You will notice the fairly wide range of eating frequency for most foods. This is an asset when linking diet to health outcomes. Figure 1 refers to the cruciferous vegetables—broccoli, cabbage, Brussels sprouts and cauliflower.

About 40% drink soy or rice milk and about 45% indicate never eating meat.

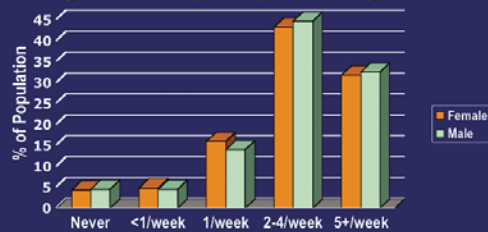
**Broccoli etc: Frequency of Eating**



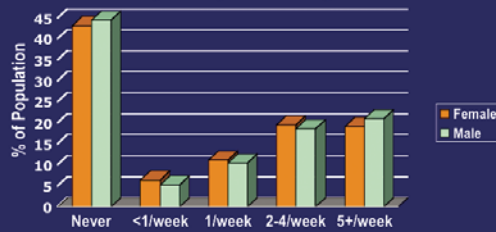
**Eat Meat Analogues**



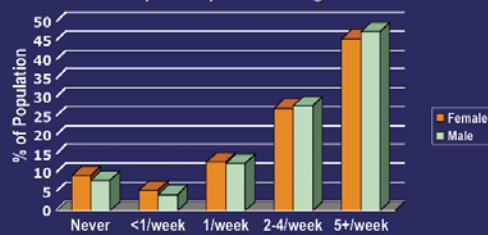
**Legumes: Frequency of Eating**



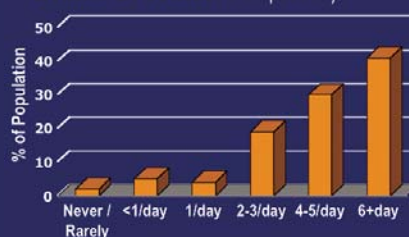
**Meat: Frequency of Eating**



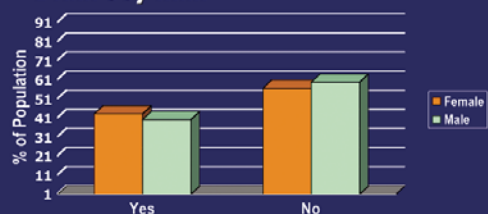
**Nuts: Frequency of Eating**



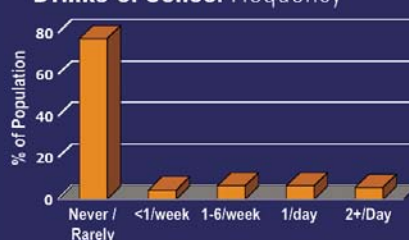
**Drinks of Water: Frequency**



**Drink Soy Milk**



**Drinks of Coffee: Frequency**



## Is your Name Misspelled?

Oops! We're sorry. If your name or address is incorrect on the address label, could you please let us know? Make the corrections and return the address panel to us.



## Once is Enough!

You only need to enroll once in Adventist Health Study-2. And complete the BIG diet and lifestyle questionnaire ONCE only please! Unless, of course, the dog ate it before the questionnaire was returned to the AHS-2 office.

# Did you know...

... that Adventist Health Study-1 was the first to discover that men who had a high consumption of tomatoes reduced their risk of prostate cancer by 40%?



**Did you know** that California Adventists in Adventist Health Study-1 are perhaps the longest-lived population group that has yet been formally described? Life expectancy at birth for Adventist women was 82.3 years and for men—78.5 years.

## 39 Successful Camp Pitches

Summer was a busy time as senior researchers visited 39 camp meetings to share reports on the study. Thousands learned about the study for the first time and many enrolled.

"We plan to visit as many camp meetings as possible each year to update members on the results and progress of the study".

*Melvin and Elaine Derby and Eloise Bickley-Mattison, participants in the 1976 study, talk with Dr. Terry Butler at the Oregon campmeeting.*

## Frequently Asked Questions

### FAQ

#### 1 Why do you need 125,000 in the study?

This is the number calculated to provide meaningful results with confidence during six to ten years of follow up. If we had a smaller group it would take relatively longer to obtain the same results. Of course, we'll be happy to have more than 125,000 in the study.

#### 2 How long will the study continue?

This is a long-term study. The initial 5 years of funding ends in 2006. During this period the important work of enrolling the members and collecting the baseline lifestyle data takes place. We then expect to receive another 5 years' of funding to mainly ascertain health outcomes and disease events in our population. But the study has the potential to go on for 15 or 20 years and make important contributions in many areas of health.

#### 3 Besides completing the big questionnaire, what else is involved in the study?

That is the major contribution we ask of you. But every two years we will send you a very brief questionnaire to list any hospitalizations you may have had and any major changes in health. Every five years we hope to ask you for an update on your eating habits.

One thousand responders will be randomly selected

to participate in the Support Sub-study to help validate our questionnaire. Another small group will be invited to take part in a Church Clinic Pilot Study to test the feasibility of extending church clinics to the whole group.

#### 4 Where does the money come from?

All money for the study is a grant from the National Cancer Institute, a division of the National Institutes of Health (NIH) that funds the major health and medical research in the U.S. These are your tax dollars working to benefit the population.

There are rigorous accounting procedures for all expenditures. While Loma Linda University and the Seventh-day Adventist Church support the project in many ways they give no direct funds for the study.

#### 5 Why do you require people to be 'fluent' in English?

By "fluent" we mean being able to read, understand and answer a relatively complex questionnaire in English. Some people who have English as their second language may find this difficult. At this stage we do not have funding to translate the questionnaire or the necessary materials to conduct the study in other languages.

Check Other FAQ's on our website.

#### For more information

**Write:** Adventist Health Study-2  
Evans Hall, Room 203  
Loma Linda University  
Loma Linda, CA 92350

**Call:** Adventist Health Studies  
toll-free 1-866-558-6268

**Email:** ahs2@sph.llu.edu

**Website:** www.adventisthealthstudy.org





**Did you know** that Adventist Health Study-1 was the first study to show that drinking 5 or more glasses of water a day as compared to 2 glasses or less may reduce the risk of heart attack by 50%?



*“Adventists are a national treasure for health research because of their diversity in diet.”*

Dr. Ralph Paffenbarger – Stanford University



Volunteers Elaine and Royce Thompson help at the Loma Linda AHS-2 office.

## Volunteers Make a Mark

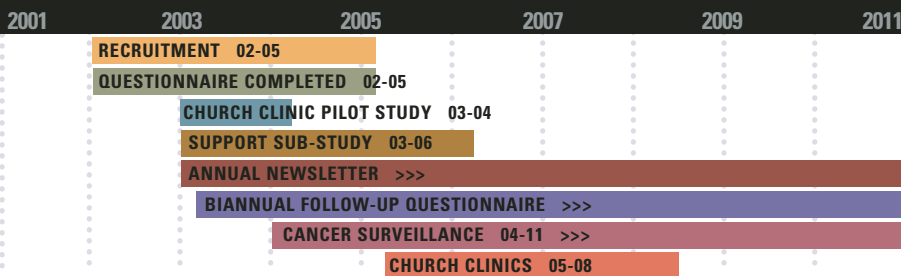
Royce and Elaine Thompson had every intention of completing their questionnaires for Adventist Health Study-2. But after they returned from a trip, a friend told them—mistakenly—that their forms were out of date.

Believing the study important enough to merit extra attention, Elaine drove to Loma Linda University, near their home, and asked for a new set of questionnaires. While there, she talked with research associate Hanni Bennett. “Do you need volunteers?” Elaine inquired.

Thus began a two-day-a-week involvement with Adventist Health Study-2 that continues to bring Royce and Elaine satisfaction. “Our background is in health care,” Royce explains. “I was in hospital administration in Puerto Rico, Thailand, and Singapore, and Adventist Health Systems in Florida until I retired. Elaine was the director of medical staff services for 18 years at Florida Hospital.”

Royce and Elaine believe in the value of the study. Their volunteer work gives them an opportunity to “rub shoulders” with the health study team and to continue their involvement in health ministry.

## Proposed 10 Year Study Schedule



### SUPPORT Sub-Study

The SUPPORT Sub-Study is a small study of 1,000 persons specially selected from AHS-2 participants in a few churches across the country. The study is designed to fine-tune the relationship between diet and health.

As you probably noticed when you tried to reply to the detailed dietary questions, it was sometimes difficult to decide whether you ate a particular food 3 times per week or 4-5 times per week. This is a common problem in these types of studies. The SUPPORT study is designed to compensate and correct for this problem.

Those selected for this study will be contacted sometime during the next 2 years. Since these participants are specially selected, no others can fully take their place. Participants will receive a free health check and a free health appraisal. Over a period of eight months they will be called several times to ask about the previous day's diet and weekly physical activity. They will also be asked to

repeat a shorter, but similar dietary questionnaire to the one completed at enrollment in AHS-2.

The SUPPORT study is extremely important for the success of the overall AHS-2 study and we very much hope that you will participate in this, if asked.

### Church Clinic Pilot Study

This second small study is designed to test the feasibility of conducting free health clinics for all who have enrolled in the AHS-2. During the early part of 2004, we will conduct health clinics in about 40 selected SDA churches in California, Oregon, Washington, Idaho and Texas.

All who have enrolled in AHS-2 and who belong to these selected churches will be offered a free health check-up at their local church. This will include measures of body fat, height and weight, blood pressure and drawing of blood. Participants will receive a health appraisal based on the clinic findings and their responses to the

lifestyle questionnaire.

Our experiences from the Church Clinic Pilot Study will form the basis for applying for funds to conduct similar clinics for all participants in the AHS-2 study. We hope that if your church is selected for this study, you will come out to get your free health check and health appraisal.

### Faith and Worship Sub-Study

We have some evidence that spiritual beliefs and religious practices enhance health. Future plans include the study of the effect of church attendance, prayer, Sabbath observance, faith and hope, etc on well-being in the Adventist population.

Dr. Jim Walters, faculty of religion, Loma Linda University, and others are currently testing a questionnaire. In the next year or so, subject to funding availability, AHS-2 will invite up to 10,000 of our group to participate in this important study. If invited, your participation is strictly voluntary, of course.



Adventist Health Study-2  
Evans Hall #203  
24785 Stewart Street  
Loma Linda University  
Loma Linda, CA 92350

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# Report 2003

RETURN SERVICE REQUESTED

## Address Correction

Please correct any mistakes or changes in your name and address and return this complete panel to Adventist Health Study-2.



Please **PRINT** clearly

FIRST NAME			MIDDLE INITIAL			LAST NAME		
STREET						APT#		
CITY			STATE			ZIP		

## Thousands of Volunteers Help with Study.

**M**ore than 8,000 church volunteers will be actively involved in helping with the study during the first five years.

This is a huge study - one of the largest long-term studies in the country- perhaps the best yet of diet and cancer. There is an immense amount of work and without a dedicated volunteer force it would be impossible.

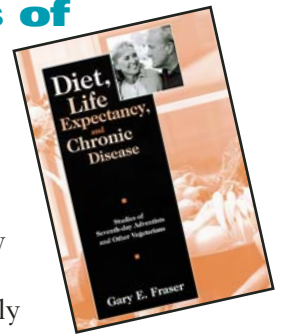
One of the rich traditions of Adventism is to share a better way of life and so more than 4,000 churches have said, **"This is our study."**

Pastors, church clerks/secretaries, AHS-2 coordinators, health ministry leaders, health professionals, LLU Alumni, enthusiastic laypersons and church administrators have taken time in their busy schedules to promote the study and enroll other church members. The research team at LLU says a big and grateful thanks to you all.



## New Book Shares Forty years of Research

**D**r. Gary Fraser's book, *Diet, Life Expectancy and Chronic Disease: Studies of Seventh-day Adventists and Other Vegetarians* was recently published by Oxford University Press. This is the book that gives detailed results of the 1960 and 1976 Adventist Health Studies.



The 371-page book explores the evidence that links diet and vegetarianism to health and life expectancy. Dr. Fraser describes what happens to Adventists compared to non-Adventists with a focus on cancer and heart disease. It also describes the evidence linking particular foods to health and disease. While intended as a reference for health professionals, it is very readable by the interested layperson. The book can be purchased at Amazon.com.