

This is our second annual AHS-2 newsletter sent to all participants. Each year during the study we will include the latest findings and give an update on plans and activities.



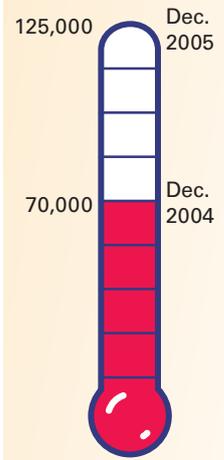
## Adventist Health Study 2

better health for everyone!

# Report 2004

DECEMBER

### Progress Results



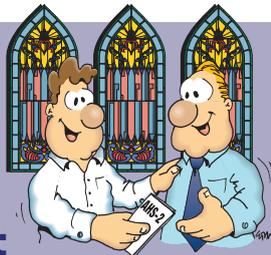
As you see we need another 55,000 to reach our goal for completed surveys. Can we do this during 2005? We hope so. Our funding for the recruitment phase of the project finishes in June 2006. To guarantee continued NIH funding to 2011 we need at least 105,000 participants by the end of 2005. It is a big project and we depend so much on our volunteer recruiters in every church.

## Making Progress Toward 125,000

**M**ore than 70,000 completed questionnaires have been returned to the Loma Linda AHS-2 office since we started recruiting members in February 2002. It has been a mammoth and challenging undertaking to make the study one of the largest and best of its kind in the world. Without your participation it would not be possible. We thank you for

your continued involvement in the study and your personal influence to help recruit more members.

Currently 200-500 questionnaires are returned each week, but we would like to receive many more. If you know of someone who has an uncompleted questionnaire at home, can you please encourage him or her to return it soon?



### Can You Recruit One More?

If everyone in the study could recruit just one other member we would easily reach our goal. Perhaps you might recruit 2 or 3 or 5 or more! Thank you for your help. Here are some suggestions:

- Get some enrollment forms from your church or ask us to send you some.
- The personal one-to-one direct invitation is the most effective.
- Ask your eligible family members and relatives to join.
- Get your Sabbath School class or small group involved.
- Introduce the study to shut-in or non-attending members.
- Be positive; share the blessings of the study. Encourage members to complete their survey.

### Volunteers: The Success of the Study

**W**e thank all the volunteers who are making this study a success. From the local church recruiters, health ministry leaders, church secretaries, pastors and to all those who complete the questionnaire—each make a valuable contribution.

In our Loma Linda office several retired health professionals spend time each week helping us with various tasks.

Hanni Bennett (right) discusses protocols with the volunteers Royce Thompson, Leon and Gladys Hulse and Shirley Javor.



# Did you know...

... Adventists in AHS-1 who attended church 3 or more times a month compared to those who attended church less than once a month had a 25% lower risk of dying from all causes and a 58% lower risk of dying from heart disease.

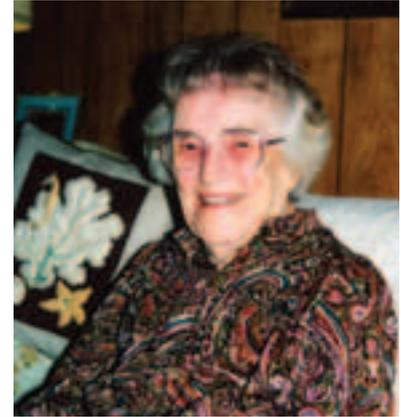


**Did you know** In AHS-1, men and women who had a high level of physical activity compared to those with a low level showed a 20% reduction in the rate of dying from all causes.

## Who We Are

Each person who has joined AHS-2 is special and important. But here is a statistical snapshot of the first 62,853 members who had returned the AHS-2 questionnaire by September 2004.

Descriptive Statistics	♀ Women	♂ Men
Number of participants	40,980	21,873
Age groups		
Less than 45 years	6,443	3,069
45-64 years	18,483	9,776
65-79 years	11,126	6,400
80 plus years	4,200	2,354
Average Age	60.0 years	60.8 years
Average Height (inches)	64.2 inches	69.9 inches
Average Weight (pounds)	160 pounds	185 pounds
Average Body Mass Index (BMI)	27.4	26.7
Overweight (%)	58.1%	61.9%
Ethnicity %		
White/Caucasian	65.2%	71.6%
Black/African American	25.9%	20.1%
Latino/Hispanic	3.8%	3.5%
Asian	2.6%	2.8%
Other	2.6%	2.0%
Education %		
Grade School	2.4%	2.7%
High School	20.4%	17.1%
Some College	30.6%	24.9%
Graduate	34.3%	28.3%
Post graduate	12.4%	27.1%



Lydia Newton

## 26 Centenarians in Study

So far twenty-six members (19 females, 7 males) over the age of 100 have completed the questionnaire. We salute their commitment and wish them continued health. Many are still very active. There are another 800 members over the age of 90 who have also completed questionnaires. As far as we know there is no other study with so many very elderly members.

Lydia Newton, the oldest member in the study, celebrated her 111th birthday in March 2004 and is the tenth oldest living person in U.S. Lydia lives in Arizona with her 90 year-old daughter and son-in-law, Marguerite and Richard Rader. Lydia continues to express an optimistic outlook on life and faith in God.

## 44,000 Surveys Somewhere?

Where are the 44,000 surveys mailed out to members but not yet returned? Are they half completed, under beds, in drawers, among piles of paper or missing?

We do need these completed and returned. If you know of members who have the questionnaire tell them that it's not too late. If it has been lost we can send another.





**Did you know** Eating donuts may be risky for your health as you get older. In AHS-1, those Adventists aged 84, or older who ate donuts once or more a week compared to those who ate them less than once a week had an almost 40% increased risk of dying from heart disease.

## Coding the Nutrition Questions

**H**aving complete information about the foods you eat will help us determine which foods and nutrients protect against or increase risk for certain diseases. Two particular interests are soy isoflavones and calcium.

The Nutrition Team checks all the extra foods that you hand-wrote in and assigns codes. When we don't have a code for a commercial product or homemade item, we contact the manufacturer, search the internet, go to the store, or contact you for the information on ingredients and nutrients. We, then, create a recipe and a new code for that food. So far we have dealt with 120,000 such items!



Lakshmi Devarkonda and Karen Jaceldo check nutrients

## Most Write-in Extra Foods

**D**o you remember checking labels on packets and cans and writing-in product brand names? For every 100 questionnaires, about 97 have write-in food entries. We code on average six write-in entries per questionnaire. For every questionnaire, about 90% of the write-in entries are "easy" to code, and 10% are "difficult". The difficult foods take about 20 minutes/questionnaire of food scientist or nutritionist time to research the food and develop a recipe.

## Check Out Your Church Response

You can check out how your church is progressing with questionnaires returned by going to our website [www.adventisthealthstudy.org](http://www.adventisthealthstudy.org). Click on the tab, "Progress of Enrollment", and then click your Conference. You will see a list of all the churches in the conference with their progress results. These results are updated every two weeks. If you don't have access to the Internet you can contact us by mail or phone for your church results.

## Conferences Vying to Finish First

Virtually all conference administrations are wholeheartedly supporting AHS-2 enrollment. We thank the Presidents and their teams of leaders and pastors who are doing all they can to achieve 100% of their participation goal.

At the moment the Montana Conference leads with 91% of their goal. They are followed by Upper Columbia at 85%, Idaho 82%, Iowa-Missouri 79% and Northern California at 71%. Twenty-five of the fifty conferences have so far achieved over 50% of their goal.

## Enrollment Progress by Union

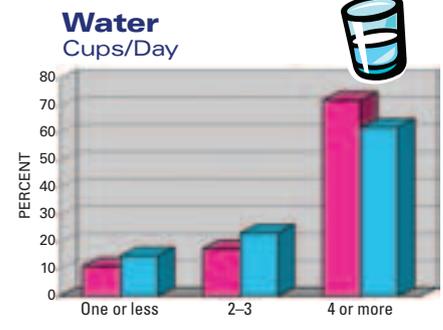
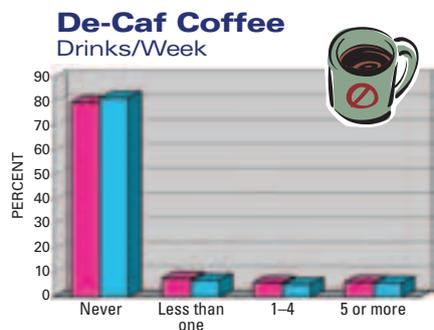
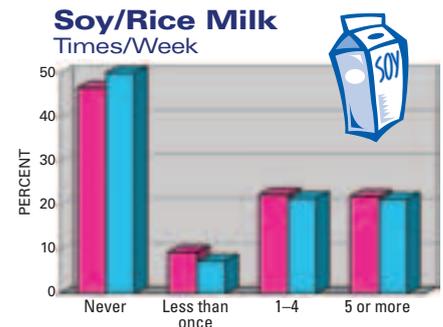
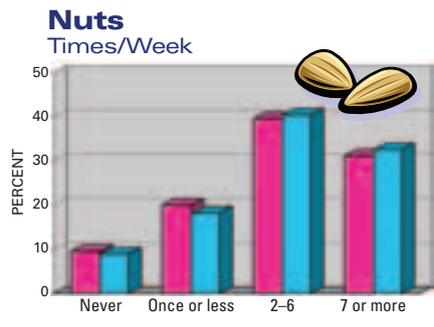
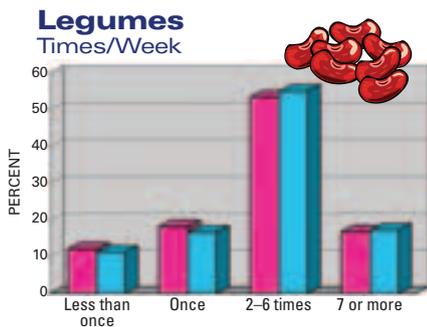
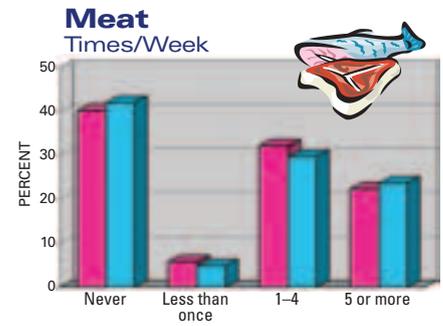
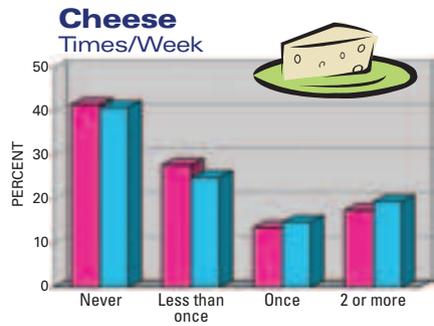
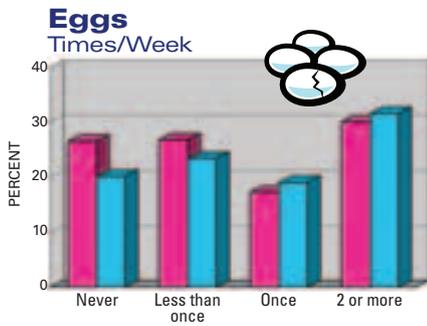
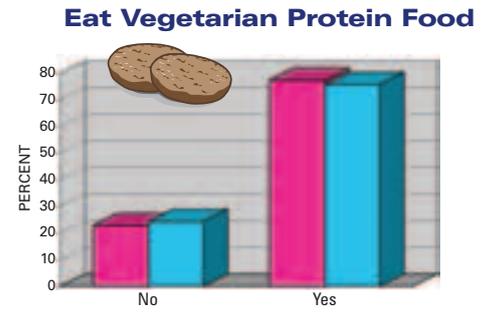
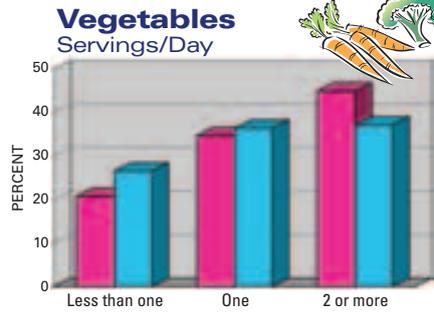
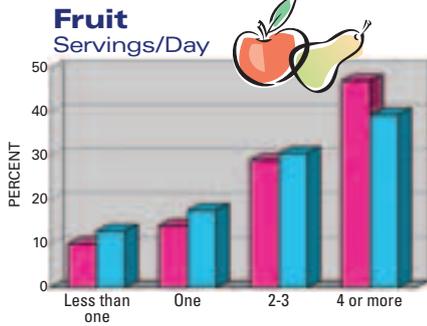
**A**HS-2 challenges each Union, Conference and Church to achieve a participation goal of 24% of their official membership completing and returning the questionnaire. Recruitment started in California in 2002, Mid-America in 2003 and the East and South in 2004. Some Regional Conferences will start in 2005. This chart shows each Union response to November 2004.

Union	Goal	Surveys Returned	% of Goal
Atlantic	16,520	5,065	31
Columbia	17,430	6,142	35*
Lake	11,923	6,035	51
Mid-America	9,812	6,400	65
North Pacific	15,741	11,488	73
Pacific	28,412	16,795	59
Southern	31,650	12,625	40*
Southwestern	10,490	4,971	47*

\*Initial recruitment efforts still in progress

A major aspect of our research is to investigate the role of diet in health and disease. These charts describe just some of our eating and drinking habits (for those in the study as of September 2004). There is much diversity, and that is good for our research objectives. During the next few years we shall compare the reported foods to the risk of new cancers, heart disease and other diseases. The frequency of eating and drinking is shown in percent for females and males.

# What We Eat and Drink



Female Male

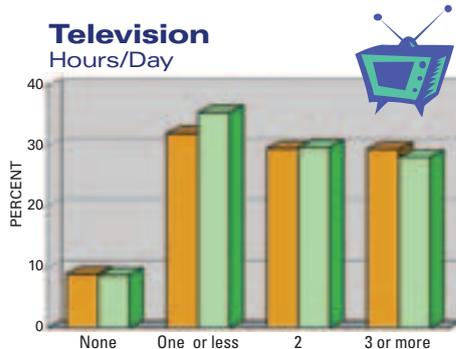
The following charts describe how the first 62,853 members in AHS-2 responded to questions about various lifestyle activities. You will notice some diversity in the group. The frequency of activity is shown in percent for females and males.

## What We Do

**Exercise**  
Times/Week



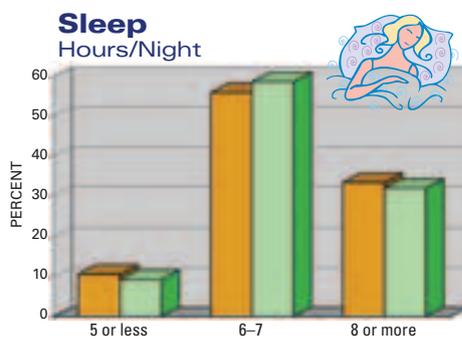
**Television**  
Hours/Day



**Drinking Alcohol**



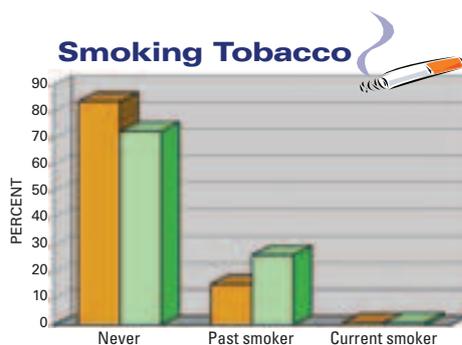
**Sleep**  
Hours/Night



**Eating Fast Food**  
Times/Week



**Smoking Tobacco**



**Restaurant Dining**  
Times/Week



Female Male

## How to Calculate Your Body Mass Index

In this newsletter and in many articles you will find reference to Body Mass Index (BMI).

The BMI is a good indicator of healthy weight. BMI correlates with body fat and is a tool used to assess general risk of health problems associated with body size.

- 1 Measure your weight in kilograms. (Conversion factor 1 pound = 0.45 kg)
- 2 Measure your height in meters. (Conversion factor 1 inch = 0.025 meters)
- 3 Use the formula to divide weight by height squared.  

$$\text{BMI} = \frac{\text{Weight (kg)}}{(\text{Height in m})^2}$$

### What does the BMI number mean?

Less than 18.5 = Underweight  
 18.5-24.9 = Ideal/Healthy  
 25-29.9 = Overweight  
 30-39.9 = Obese  
 40 + = Extremely obese

Decide if you need to gain weight, lose weight or maintain your healthy weight.

Here is a website that will calculate BMI for you.  
<http://nhlbisupport.com/bmi/bmicalc.htm>

# PLANS FOR 2005

In 2005 the AHS-2 research team at Loma Linda has a number of major tasks to accomplish.

**1** Promotion in 570 churches that have not yet started recruitment.

**2** Conduct major recruitment of African-Americans in the Northeast and South.

**3** Launch the study and recruit members in Canada.

**4** A short concerted re-promotion effort in all churches to recruit new participants.

## Meet the Senior Researchers

**C**urrently about 45 people are employed in the AHS-2 team at Loma Linda. There are programmers, dietitians, statisticians, and clinical and clerical persons with many vital skills. Several volunteers also help at our main office.

Most of the thirteen senior researchers, in addition to

AHS-2 roles, have other responsibilities in the School of Public Health such as lecturing, consulting or clinical work. They represent eight different countries and most have training in Epidemiology, the basic science of Public Health. Epidemiology is the study of the causes of disease and how disease is distributed in different groups of people.



**Gary E. Fraser MD, PhD,**  
Principal Investigator AHS-2 and Professor of Medicine and Epidemiology. Born and largely educated in New Zealand. Main academic interest is how lifestyle, particularly diet, may prevent chronic diseases such as heart disease and cancer.



**Ella Haddad DrPH, MS,**  
Associate Professor of Nutrition. Supervises the AHS-2 blood specimen preservation lab. Taught for many years at Middle East College in Beirut, Lebanon. Research interests include the adequacy of vegetarian diets and the role of nuts in a healthy diet.



**Susanne Montgomery PhD, MPH,**  
Co-Investigator and Professor of Health Promotion and Director of the School of Public Health Research Center. Born in Germany. Involved in studying social and behavioral causes of ill health in the U.S. and overseas.



**Hanni Bennett,**  
Senior Research Associate and AHS-2 Office Manager. Born in Germany, Hanni has worked for the Adventist Health Studies for 20 years. Major role in management of personnel and resources, and the processing of questionnaires.



**R. Patti Herring PhD, RN,**  
Co-Investigator and Associate Professor of Health Promotion. Responsible for the recruitment of the Black/African American church members for the study.



**Susan Preston-Martin PhD,**  
Professor of Preventive Medicine, University of Southern California. Responsible for identification of new cancers among AHS-2 cohort members. She helped establish the cancer registry for Los Angeles County and has conducted nationally recognized cancer research.



**Larry Beeson DrPH, MSPH,**  
Co-Investigator and Associate Professor of Epidemiology. Involved with the Adventist Health Study since 1974. Cares for data base management, data quality control and the record linkage between AHS-2, the National Death Index and state cancer registries.



**Karen Jaceldo-Siegl DrPH,**  
Co-Investigator. Born in the Philippines. Karen and her staff supervise the nutrient analysis of all the foods that participants record on their questionnaires.



**Joan Sabaté MD, DrPH,**  
Co-Investigator and Professor and Chair of Nutrition. From Spain. Is in charge of the study dietary data quality control and the calibration study data. He is editor of the book "Vegetarian Nutrition", published in 2001.



**Terry Butler DrPH, MPH,**  
Co-Investigator and Assistant Professor of Epidemiology. Major role in recruitment of subjects and promotion. Born in Australia. A Pastor and Epidemiologist. Prior to current role was the Health Ministries Director of the South Pacific Division.



**Synnove Knutsen MD, PhD,**  
Co-Investigator and Professor and Chair of Epidemiology. Born in Norway where she has worked with other major longitudinal research studies. Principal Investigator of the Adventist Smog study in California



**Jacqueline Chan DrPH,**  
Co-Investigator AHS-2. Primary role in planning and supervision of the church clinics pilot and calibration study. She has researched and reported the beneficial effect of drinking water to reduce heart disease risk.



**Andy Lampkin PhD, MA,**  
Assistant Professor of Religion and Theology (Oakwood College), Director of the Oakwood AHS-2 office. Also working on a support grant—to better understand Black Adventist perspectives on health research.

**5** Continue the Support Sub-study and clinics to enroll a target of 1,000 randomly selected participants. They will enable us to validate the questionnaire.

**6** Commence "cancer surveillance" by comparison of our files with in state tumor registries.

**7** Complete the recipe creation and nutrition analysis of more than 3,000 new write-in foods.

**8** Prepare several papers for publication in scientific journals.

**9** Submit an application for the next five years of funding.

**10** Continue to scan the data from newly returned questionnaires.



## Canada Joins AHS-2

**T**he 52,000 church members in Canada now have an opportunity to participate in the Adventist Health Study. Up until now enrollment was restricted to church members resident in the U.S.

The decision to include Canada was subject to obtaining National Institutes of Health approval and determining that follow-up data, including new cases of cancer, would be relatively easy to collect. Pastor Dan Jackson, President of the Canadian Union, is very supportive of the study and was wondering when Canada would be asked to join.

## Field Representatives Needed

**I**n a number of conferences we have local Field Representatives who do marvelous work in encouraging churches to participate and achieve their goals. Lois Rigutto from Oregon is just one of our field representatives. She has encouraged 30 churches, that our research staff had found difficult to contact, to begin promotion. Without this grass roots involvement the work at the Loma Linda study office would be much more difficult.

We have more than 3,500 churches involved in the study and that is a great deal of telephone and email contacts and progress reports.

If you have a passion for the study please volunteer. Field Representatives are needed in most conferences, particularly – California, Florida, Michigan, Minnesota, Illinois, Potomac, Southern New England, Wisconsin, Washington, Iowa-Missouri, Kansas-Nebraska, Greater New York, Idaho, Upper Columbia, Carolina, Gulf States and Texas.

## WANTED: Grassroots Volunteers

**We are looking for enthusiastic members who enjoy grassroots involvement, have a passion for the study, a balanced approach to lifestyle and 2-4 hours free per week to be AHS-2 volunteer field representatives**

**Your Role:** Work with our Loma Linda research team to contact, inform and encourage churches to actively promote or re-promote the study. We want to give another big push on enrollment in as many churches as possible in the next few months. We need Field Representatives in many conferences. For further details contact Dr. Terry Butler, 1-888-558-6287 or [tbutler@sph.llu.edu](mailto:tbutler@sph.llu.edu)



## Hospitalization Forms Flood In

**I**n the last three months 37,000 biannual Hospitalization forms were sent to members who have been in the study for more than one year. Already 25,400 have been returned.

If you still have yours at home we look forward to receiving it soon. It will only take a few minutes to complete. This form will be sent out every two years and will help us to document any new cancers, heart attacks and hospital admissions. In this way we will link participants' self-reported lifestyle data to their health outcomes.

# Adventist Health Study 2

better health for everyone!



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# Report 2004

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 notify us if your address changes.

Please **PRINT** clearly

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

## Can You Help?

On February 19, Health Ministries Sabbath, we want a big push in all U.S. churches to sign-up another 25,000 members. Plan now to personally invite members 35 years and older to join. We need these extra people to make the study a success.

Recruitment team at LLU Church

## Clinics Across the Country

During the last 2 years, the AHS-2 clinic teams traveled 47,000 miles, holding clinics for 90 churches in 82 towns in 17 states. They have collected 6,139 tubes of blood, taken 4,416 blood pressures, and 1,472 bone density, cholesterol, blood sugar, height, weight and body composition readings.

There have been two types of clinics. *The Church Pilot* Study Clinics tested the feasibility of inviting all study participants to clinics where biological measurements are collected for later use in cutting edge research.

Dedicated church leaders opened churches at 5 a.m. for clinic set up. One member drove 70 miles to attend. One church went the 'extra' mile and cooked breakfast for the clinic team.

Because of the co-operation of 41 churches and 1,149 members in Southern California, Upper Columbia and South West Region, we now have the necessary experience for a huge future endeavor to conduct clinics in all churches.

## Support Substudy

The *Support Substudy* Clinic will continue for another two years. The 1,000 randomly selected participants invited to this substudy attend a clinic and agree to complete six 24-hour diet recalls, two 7-day physical exercise recalls and another dietary questionnaire. All this information is used to improve the accuracy of the data gathered from the main questionnaire.

## What Happens to Clinic Specimens?

The samples of blood, adipose tissue and urine collected from members attending the clinics are bar coded to protect anonymity, and sent on ice overnight by FedEx to our lab at Loma Linda University. Here each participant's blood is separated into 42 small capillary straws that are color coded and stored in liquid nitrogen at -190°C for later analyses, some perhaps 10-15 years in the future.

