



# STRONG HEART STUDY

## newsletter

INVESTIGATING CARDIOVASCULAR DISEASE IN AMERICAN INDIANS

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## Gila River Indian Community Elders and SHS Steering Committee Meet



*Gila River Indian Community members meet with SHS Steering Committee members.*



*Barbara Howard explains new SANDS project to elders of the Gila River Indian Community.*

More than 100 gathered on July 10 at the Elders' Concerns Meeting of the Gila River Indian Community. Mary Thomas chaired the meeting of community members, the Strong Heart Study Steering Committee and the SHS Arizona staff.

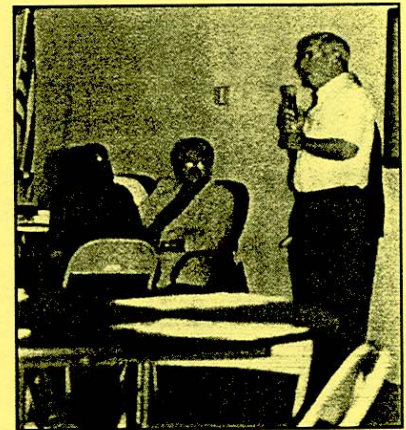
Barbara Howard presented copies of the Strong Heart Data Book to all of the elders. SHS researchers have given communities various findings of the Strong Heart Study in the past. The data book gathers together and explains many SHS findings in one easy-to-use document.

Dr. Howard also told the group about a new project, SANDS (Stop Atherosclerosis in

Native Diabetics Study). SHS researchers have been working on the planning and funding of the project for three years. The study will look for ways to either stop or reverse developing heart disease. Dr. Howard told the group how the study will proceed and asked the elders for their ideas. Many elders asked questions and gave advice. As suggested, Arizona Strong Heart staff will visit all districts giving information and asking for advice.

The group visited further at lunch. Many of the elders present were participants in the Strong Heart Study. Their willing help contributed toward understanding heart disease in the community. SHS scientists and staff are grate-

ful for their support. The 24 SHS representatives (from Washington, D.C., New York, North and South Dakota, Oklahoma, Texas and Arizona) enjoyed the meeting and the chance to hear elders' concerns.



*Mary Thomas listens as Richard Fasitz, Project Officer of SHS, addresses elders.*

# Allergies Affect Health of American Indians

Thirty years ago a University of Oklahoma physician and researcher, Dr. Everett Rhoades, observed that very few American Indians had asthma. That is not true today.

Of the 3197 participants of SHS Phase III exams, 10% of the women and 5% of the men said they have asthma. Twice that many reported having hay fever or sinusitis (infection of the sinus passages). Dr. Paul Enright of the University of Arizona supervised breathing tests for 600 of the Phase III exam group, and SHS staff gave them allergy skin tests. About 200 of those tested were allergic to something, indoors or outdoors (cats, dogs, molds, weeds or trees).

Asthma, hay fever and sinusitis are all related to allergies. People with air-borne allergies can experience hay fever when they inhale particles of the allergen (what they are allergic to). They may sneeze. Their nose may be runny or congested or itchy. Sometimes their eyes may get itchy and red for hours. (Doctors call this disease allergic rhinitis rather than hay fever, because the disease is not caused by hay and there is no fever!) Hay fever can also cause a sinus infection if the congestion in the nose prevents the sinuses from draining properly into the inner nose.

When people with asthma

are exposed to allergens, they may have a more serious reaction than hay fever. Allergens can trigger an asthmatic "attack" or swelling of the lining of the airway. This allergic reaction makes it difficult for the person to breathe.

Clearly, anyone with allergies should avoid allergens to prevent reactions. Avoiding allergens is easy if the allergen is obvious. When symptoms start a few minutes after contact with a cat, for instance, the person is probably allergic to cats. Many allergens are not obvious and can be all around us, like allergens from trees and weeds. The only way to discover allergies to those widespread allergens is to have a skin test. A drop of allergen is put on the arm with a plastic toothpick. If the skin becomes itchy, raised or red where the allergen was placed, the person is allergic to that substance.

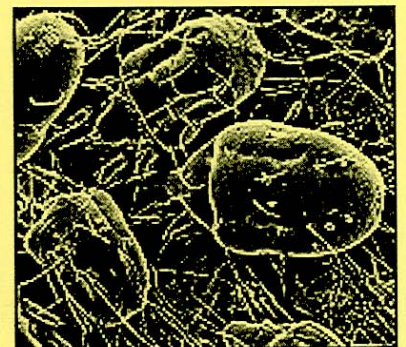
Dr. Fawn Yeh, a researcher at the University of Oklahoma, says that 10% of SHS participants with hay fever or asthma were allergic to one or more of the following: various grasses, weeds, trees, molds, house dust mites, cockroaches, cats, dogs, horses or cattle. Completely avoiding some of these would be very hard. (How could you avoid something you can't even see like a dust mite?)

While totally avoiding some allergens may not be possi-

ble, there are many things that can be done to limit exposure to:

- Dust mites. Contain dust mites. Enclose pillows, mattresses and upholstered furniture (where dust mites live) in allergen-proof covers.
- Mold. Eliminate moist conditions. Repair water leaks in home and use refrigerated air conditioning rather than cooling by swamp cooler to keep indoor humidity below 40%.
- Cockroaches. Eliminate their food sources. Store all food in plastic or metal containers and remove crumbs of food and grease from kitchen surfaces.

Two helpful books on allergies and asthma are *My House Is Killing Me* by Jeffrey May and *Doctor Tom Plaut's Asthma Guide* by Tom Plaut. Information is also available on the Web at [www.webmd.com](http://www.webmd.com).



Photograph of dust mites magnified 100 times was taken by Eric Erbe for the Agricultural Research Service of the USDA.

# Sleep Study Moves Forward



**S**trong Heart Study participants in the Sleep Heart Health Study continue their strong support of the sleep study. The SHS center of the sleep study finished the second round of data collection before any other SHHS center. Not only that, but nearly 100% of the first round participants returned for the second round of exams. "This is a remarkable achievement given the inconvenience of having an overnight sleep study," said SHS scientist Helaine Resnick. "Finishing first two times in a row shows how dedicated Strong Heart participants are to the goals of Strong Heart as a whole," Resnick added.

Researchers have already learned a great deal from the round one data. One of the reports showed that sleep apnea (brief pauses in breathing during sleep) and high blood pressure are related. If sleep apnea causes high blood pressure, having sleep apnea may increase the risk of heart disease by increasing blood pressure. (High blood pressure is a known heart disease risk factor.) Scientists are studying this question further.

Dr. Resnick examined the relationship between sleep apnea and diabetes and found that people

with diabetes had more sleep apnea than those who do not have diabetes. What scientists do not know is whether diabetes can cause sleep apnea, or whether sleep apnea can cause diabetes. Both are possible. Resnick explained that one of the reasons diabetic people have so much sleep apnea is the weight factor. Many diabetics tend to be overweight and being overweight is also a risk factor for sleep apnea. "When the effects of being overweight are taken into account, the relationship between diabetes and sleep apnea is greatly reduced. This supports the idea that obesity, rather than diabetes, is the key to most kinds of sleep apnea. However, we must still untangle the cause-and-effect relationship here, and this is very difficult," she added.

The Sleep Heart Health Study has published 14 scientific papers from the research done so far. Six more papers have been accepted for publication and researchers are preparing an additional 40.

"Now that we have completed the second phase of data collection, we are ready to ask questions about how sleeping habits change over time, and

whether these changes influence the risk of heart disease," said Resnick. "We are considering writing more grant proposals to examine diabetes and sleep in greater detail in the Sleep Study, but there are other questions we could ask as well. We are very excited about the possibilities for the future," she added.

The National Heart, Lung, and Blood Institute funds both the Strong Heart Study and the Sleep Heart Health Study. Participants for the sleep study come from several large heart studies. American Indians from the Strong Heart Study are 10% of the SHHS study group.



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# Centers Report Family Study Exams Ahead of Schedule

All centers have great news. Recruitment for the Strong Heart Family Study is high. Centers report large numbers of completed examinations:

- Arizona 764
- Oklahoma 752
- Dakotas 762

All centers expect to complete their exams early.

Staffs will soon begin second examinations of pilot study participants. In 1997, over 900 people from 32 families of Strong Heart Study participants took part in the pilot Family Study. The remarkable success of this pilot study convinced the National

Heart, Lung, and Blood Institute to fund today's large Strong Heart Family Study. The Strong Heart investigators want all of the pilot Family Study members to know how important it is for them to return later this Fall or in 2003 for a second exam. The repeat exam will give participants another look at their risk factors. They will be able to see if their risk factors have improved since their first exam in 1997.

Some of the procedures and forms used in today's family study are different from those used in the 1997 pilot study. Researchers need data from the second exam to have complete

information. SHS scientists cordially invite and encourage all pilot study participants (1997 Family Study participants) to return for their second exam. SHS staff will soon begin contacting the pilot study participants to schedule the second exams.

Why heart disease risks are higher among some American Indian families is an important question. Strong community support of the family study makes it possible to look for answers. Researchers are excited because they will soon be able to share information from this important study.