



# Strong Heart Study Newsletter

Investigating Cardiovascular Disease in American Indians

Updates for Community Members and Strong Heart Study Participants

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## Strong Heart Study Phase 7 Exam Has Started!

Dear Participants,

We are deeply grateful for your participation over the years and your commitment to create greater understanding and improvement of our tribal community's heart health.

**Phase 7 exam of the Strong Heart Study (SHS) has been launched on 11/1/2022.** It will last for two years until the end of October, 2024.

If you have participated in the previous SHS phases, you are eligible to participate in SHS7. **We invite you to join an exciting opportunity of scientific discovery.**

The Strong Heart Study Team

To schedule your Strong Heart Study appointment or if you have any questions, please call:

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## **Mona Puggal, MPH, MBA** **Strong Heart Study Project Officer, National Heart, Lung, and Blood Institute**

**Mona** is a Clinical Trials Specialist at the National Heart, Lung, and Blood Institute (NHLBI). The NHLBI has partnered with the Strong Heart Study (SHS) tribal communities and has funded the study since 1988. Mona represents the NHLBI on study committees and serves as the contact between the study and the NHLBI leadership. Mona has worked at the NHLBI for fifteen years and with the SHS for seven years.



Mona's family is originally from India and moved around a lot when she was young. Her family settled in New Mexico, with Albuquerque being her home for fifteen years.

Mona completed her Master of Public Health (MPH) degree in Epidemiology in Boston. Mona is interested in research on health disparities with the goal of improving health. She recently received a Master of Business Administration (MBA) degree. She has attended several listening sessions between tribal and NHLBI leadership and looks forward to learning more about the communities and their health concerns and needs.



## **Genetic Changes and COVID — Lyle Best, M.D.**

It has been clear that the COVID pandemic has hit American Indian communities hard. Exact comparisons are difficult, but by all indications Tribes have experienced more severe disease and death from COVID than non-Indian communities. It is often suggested that high levels of diabetes, high blood pressure and heart disease make COVID infection more severe for Indian people. It is also possible that other factors, like crowded housing and less intensive medical care, could be playing a role.

We know that our body's ability to fight off infections can be inherited from our parents.

Scientists around the world have been conducting genetic studies, asking why some people have very serious forms of COVID. And for others of similar age and health, it seems no more than a common cold. Since COVID is so closely linked to heart health, we decided to study if some of the common genetic changes that seem to increase COVID risk in non-Indian people are also having the same effect in the Strong Heart Communities.



We checked 15 tiny changes in genetic code called DNA. Most of the changes are very common in all populations. We found one change in a genetic code increased the risk of serious COVID infection. This genetic code is an important part of our immune system. This finding is just the first step of the project. If confirmed, it could have an effect on how COVID is treated and prevented.



## Amazing Race for Heart Health



Following advices provided in *Honoring the Gift of Heart Health*, some Oklahoma researchers and community members gathered in Anadarko last December to put reducing heart disease risk into action.

Participants completed a brief heart disease knowledge form. Then researchers gave a short talk.

After the short talk, participants joined '**Amazing race for heart health.**' This was a treasure hunt where teams went from station to station completing activities of **Reading Food Labels, Food High in Fat, Sugar in A Big Gulp, Blood Pressure Medications, Exercise, and Heart Attack Signs.**

At the end of the race, the first team completed it and the team had the highest number of steps won prizes.

After the **amazing race**, participants' heart health knowledge improved.

Results were provided to the National Heart, Lung, and Blood Institute (NHLBI). Next, the NHLBI will update educational materials and distribute them to Native communities across the country.



**Thank you to all who participated!**



## Stress and Changes of Thinking/Learning Pattern (NIH Toolbox)

*An interview with Dr Celestina Barbosa-Leiker and Dr Astrid Suchy-Dicey*

### Why conduct this study?

Recent results from the Strong Heart Study showed a high occurrence of brain aging, such as cardiovascular or Alzheimer's disease. Both of these can result in dementia. High stress, trauma, and depression might increase these risks. In contrast, community connectedness, better health related quality of life, and less use of harmful materials to our body may lower the risk. Our project aims to study these connections, and to find opportunities for dementia prevention.



### What do you want to accomplish with this study?

We want to measure and learn brain aging. First, we need to measure cognition types (types of thinking or learning). We will use a set of forms called the NIH Toolbox. We will look at how well the NIH Toolbox works to measure thinking or learning types. Then, we will look at how the NIH Toolbox measures are associated to different life measures, such as mental health, community life, and health habits.

### How is this study different from other studies?

This will be the first study to examine this set of thinking/learning measures in American Indians, and whether these measures work in the way they are meant to work. Also, this will be the first study to look at how aging and changes of thinking/learning types are related to other life measures such as individual health.

**How will you conduct this study?** We are partnering with the Strong Heart Study to collect these data. All data will be on tablets.

### Who is funding this study?

The National Institutes of Health have funded this study through the National Institute on Aging.



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