



Upcoming clinic visit features two new procedures

CHS Coordinating Center

Cardiovascular Health Study (CHS) staff at the four clinical centers are calling participants now to schedule the ninth CHS clinic visit. This year brings two new procedures into the picture: retinal photography and a blood vessel function test.

CHS has always asked questions about your vision, but has never actually examined the eye. This year, a picture of the eye's retinal wall will be taken to evaluate the blood vessels and other characteristics of the eye. (See article on page 3.) Investigators hope that what they discover about the small vessels in the eye will help them better understand properties of other blood vessels in the body.

As you may remember, ultrasound scans of the carotid arteries in the neck were done in two previous CHS exams. This year, investigators will use ultrasound to measure blood vessel function in the brachial artery, the major artery in your upper arm.

Investigators will examine the change in size of blood vessels before and after a blood pressure cuff is released. (See article on page 2.)

Both these new procedures will provide CHS researchers with exciting information about cardiovascular health that has never been collected before in a population of this age.

The CHS exam will take between 2 1/2 and 3 hours this year. In addition to the new procedures, many of those with which you are already familiar have returned, including blood pressure measurement, blood collection, cognitive testing, physical functioning, and the famous (or maybe infamous) interviews. We will also be asking you to return for an MRI scan of the brain. Evaluating the change that has occurred since your last MRI is extremely important in understanding the aging process. More on that in our next newsletter!

Taking care of yourself in the summer months

Information courtesy of the National Institute on Aging

In the warm summer months, many of us like to get outside and enjoy the sunshine. To reduce your risk of heat stroke and heat exhaustion, follow these tips:

- ♥ Drink plenty of liquids, even if you don't feel thirsty.
- ♥ Avoid midday heat and refrain from exercising during the hottest part of the day.
- ♥ Wear light-colored, lightweight, loose-fitting clothing. Don't overdress.
- ♥ Wear a hat or use an umbrella for shade.
- ♥ Ask your doctor whether you are at particular risk for a heat-related illness because of a medication you are taking.

Important new blood vessel test added to 1997 exam

by John R. Crouse, MD, Principle Investigator, Brachial Ultrasound

This year we are offering a new opportunity to participants in the CHS study. Working together with the National Institute of Health, we developed a test that looks at blood vessels in a brand new way, without drawing blood or using other “invasive” procedures.

Why we are doing this test

The Brachial Artery Reactivity Test will help us understand how blood vessel function is related to health characteristics, such as cholesterol, blood pressure, body weight, and smoking status, as well as to heart attack and stroke. This new method of measuring blood vessel function should respond very quickly to the influence of certain behaviors or drugs that participants might use to improve their health, such as vitamins, cholesterol-lowering drugs, or increased exercise. As a result, we are able to measure what effect, if any, those behaviors or drugs are having.

Why this test is important

This will be the first study of its kind to evaluate such a large number of participants at multiple sites around the country and to enroll participants of the age of CHS participants. We anticipate that the results of this test will lead to new approaches of

diagnosing and treating heart disease, and, especially in conjunction with other measures of blood vessel health such as the measure of the carotid arteries that you have already undergone, will provide new opportunities for us to measure risk of developing heart disease in the future.

How this test is familiar

In previous exams we looked at the structure and composition of the arteries in your neck using the same ultrasound machine. The information we gathered showed us new relationships between the structure of the blood vessels in the neck and various disease conditions including hypertension, cholesterol, diabetes and cigarette smoking. It also improved our ability to measure a person’s risk of developing heart attack and stroke in the future.

How the test is done

The Brachial Artery Reactivity Test does not require drawing blood. We will increase blood flow in your arm by inflating a blood pressure cuff between your wrist and elbow and then releasing it quickly. Using ultrasound, we measure the change in size of the blood vessel. A healthy response is an increase in diameter of the blood vessel over two to three minutes after release of the blood pressure cuff.

Hear ye, hear ye!

Reprinted with permission from The Women's Health Initiative Newsletter

Do you ever miss the punch line of a joke, not because you didn't understand it, but because you didn't hear it? Is it hard for you to hear how two words like tan, fan and pan sound different? Do you often strain to hear conversations, either on the phone or in a crowded room or restaurant? Do you find yourself nodding in answer to a question, unsure of what was asked but not wanting to admit it? Incidents like these could mean you have some loss of hearing.

It's hard to admit a hearing loss, but it's important to face the truth if you suspect a problem. Hearing problems don't go away by themselves and they can get worse. Hearing loss can make you appear confused, unresponsive, or uncooperative, when in fact you just didn't hear what someone said, or didn't hear it clearly.

Most hearing loss happens naturally as people grow older. By the age of 65, three out of five people have some degree of hearing impairment. Because it occurs slowly, many people don't realize they have a hearing loss. They find they can still hear people speaking, but they can't understand all the words. That's because the hearing losses are often greatest in the high frequencies. Some consonant sounds, like sh, ch, t, f, h and s are in this range. If you miss them, words won't make sense and conversations can be frustrating.

Physical conditions such as infections, heart conditions, high blood pressure, head injuries and tumors can have an impact on your hearing. Long exposure to loud noises can also injure your hearing. Even too much ear wax can make it hard to hear.

If you experience some signs of hearing loss, see your doctor. He or she will give you a complete ear exam to find out how serious the problem is. There may be an easy way to fix it, such as flushing the ear canal to remove wax.

Types of Hearing Aids

Behind-the-ear model

In this type, the microphone, speaker, and amplifier are in a curved case that fits behind the ear. A short plastic tube conducts sound from the case to an ear piece inside the ear. This model offers several advantages: the batteries last a long time, they have room for powerful circuitry, and they provide better sound quality.

In-the-ear model

These are custom-molded to fit the shape of your ear. All the components are in a case that fits directly in the ear. The aid itself, the volume control, and the battery component are all quite small.

In-the-canal model ("canal aids")

This type fits entirely within the ear canal and is barely visible from the outside. This is a cosmetic advantage, but there are some drawbacks. They are too weak for people with severe hearing loss. Also, it takes good manual dexterity to reach the controls and change the battery.

If you need a hearing aid, make sure your hearing aid specialist will work with you over several visits. A good specialist will teach you how to wear, maintain and adjust your hearing aid, and will be available in the years to come if you need additional service. Before you buy, find out exactly what is included in the total purchase price. Ask if there is a minimum 30-day trial to wear the hearing aid and a one-year electronics warranty. Also, determine how much money will be refunded if you need to return the hearing aid.

Continued on next page

Continued from previous page

People with hearing loss too severe to be helped by standard hearing aids may benefit from cochlear implants. The implants use a mini-microphone worn behind the ear, a calculator-sized processor that can be worn on a belt, a receiver surgically implanted in the ear, and electrical contacts that run through the innermost part of the ear.

Cochlear implants are approved for deaf people whose auditory nerve is still intact, and for those who understand less than 30 percent of speech with hearing aids. Most implant users have some hearing improvement. There is a risk, however: it fails in about 2 percent of cases, and these patients lose any natural hearing they may have had prior to the operation.

The average person waits five to seven years after first noticing a hearing problem to seek help for it. Those can be years of unnecessary isolation and frustration, because the earlier you seek help, the sooner you can be treated. "Hears" to your health!

For more information about hearing loss

- ♥ American Speech Language Hearing Association
10801 Rockville Pike, Dept AP
Rockville, MD 20852
ASHA Helpline: 1-800-638-8255
- ♥ Self Help for Hard of Hearing People, Inc.
7910 Woodmont Ave, Ste 1200
Bethesda, MD 20814
(301) 657-2248
- ♥ The National Institute on Aging
Information Center
PO Box 8057
Gaithersburg, MD 20898-8057
1-800-222-2225

CHS participant shares poetry

CHS participant Margaret Gardner began writing poetry on April 19, 1995, after hearing about the Oklahoma Federal Building bombing. It was her way of coping with the tragedy. She has written numerous poems since that time.

CHS

You have given from your heart,
You have shared many things
You have taught us well,
Good health your program brings.
With hearts big as mountains,
Kindness flowing like the sea,
Keeping others healthy,
happy you seem to be.
If you had special wishes,
I'd wish them all for you,
For everything you ever wanted
Just because you're you.

by Margaret Gardner
September 19, 1996

Special Wishes

If I had special wishes,
To ask for in this world
I would ask for banners
For you to be unfurled.
Compassion and kindness you impart,
Your dedication comes from within your heart.
A combination of the three, there is no end,
Banners would be flying
For the CHS, they're our special friend.

by Margaret Gardner
February 25, 1997

Thanks to all of you!

Dr. Greg Burke, Principle Investigator, CHS Bowman Gray Field Center

On behalf of all of us at the Bowman Gray CHS clinic, I would like to take this opportunity to thank you for your continued participation. Ten years ago, when the CHS was being planned, many people believed that older adults would not, or perhaps could not, participate in a long-term study assessing the causes of heart disease. It is our pleasure to say that they were wrong. Thanks to you, CHS has been a resounding success.

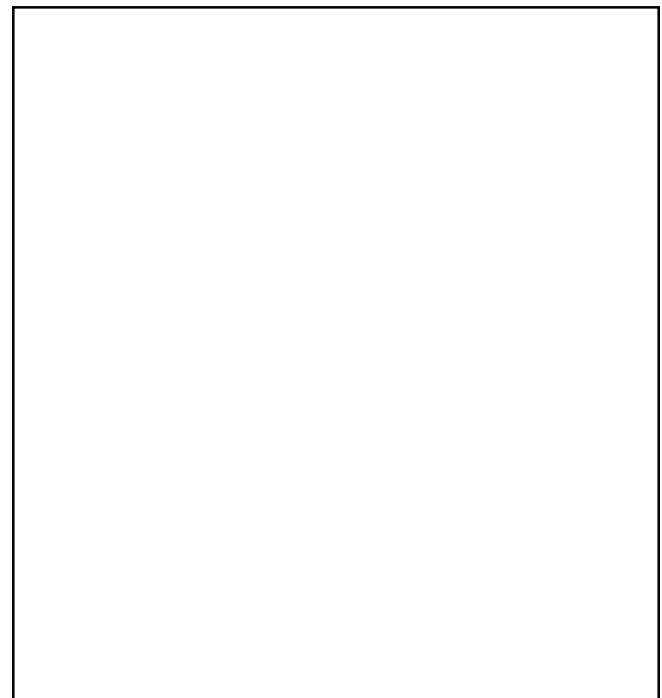
The purpose of CHS is to understand whether the risk factors for heart disease observed in middle-aged persons are equally important in older adults. Many questions have already been answered. We now know that elevated blood pressure in older adults is an important cause of strokes and heart attacks. We have a better understanding of how cholesterol and other fats in the blood are related to risk of heart attacks. We have also learned how diet and physical activity levels affect heart disease risk factors such as blood pressure, blood fats, diabetes and obesity.

In spite of all that we have learned thus far, many unanswered questions remain which require your continued support and participation. We must continue to follow members of the CHS in order to determine, for example, whether ultrasound measures in the neck arteries or ultrasound measures of the heart are related to risk of developing a heart attack.

Many of you have had an MRI scan of your head, a test which gives us pictures of your brain. In order to better understand which MRI factors predict who develops stroke or dementia, we are asking participants to have a second MRI scan.

Several of you have experienced health benefits from the findings of the CHS and we have shared these with you and your doctor. The work that we have already done and continue to do will also help

improve medical practice and disease prevention efforts for the health of future generations, including our children and grandchildren. We wish to thank you again for helping to make this possible. We greatly appreciate all your assistance and support in the past and we look forward to a continued pleasant relationship with you in the future.



Your CHS Staff

1st row: Anna Jones, Beverly Tucker, Cindy Hall

2nd row: Lorraine Shearer, Martha Ciofalo, Jean Callaghan

3rd row: Beverly Vernon, Vicki Guchemand, Lata Menon, Corliss Cook, Roslyn Collins.

4th Row: Dr. Sharon Jackson, Harriet Weiler, Dr. Greg Burke, Cathy Nunn

Your CHS staff at Bowman Gray: Part 1

We would like to introduce or reintroduce our Bowman Gray School of Medicine CHS staff to you. Some of us are fortunate to see you and talk with you when you come in for your annual visits, but others work behind the scenes. Here is a brief introduction to each of us:

Martha Ciofalo, Data Collector

Having started as a volunteer for CHS when the study began, I was recruited to work as a paid volunteer in 1994. I had resisted for a while because of my involvement with many volunteer activities, such as SECCA, charter member of the Senior Advisory Board at Belks, and Sons of Italy. I also attend aerobics classes. My position at CHS involves interviewing participants who have had events, then writing up reports of the interview. Since I am considered an office clerk, I fill in wherever there is a need. When I hear of people at my state of life sitting back and letting life pass by, I am pleased to have an interesting occupation, working with younger people, which keeps me from "getting old".

My family in Winston-Salem consists of my daughter, Diane, her husband, David, and two lovely granddaughters. Katy has just finished her first year at UNC-Chapel Hill and Jennifer is finishing her junior year at Reynolds. One of my greatest pleasures is traveling. I am looking forward to an Elderhostel trip to China in October.

Roslyn Collins, Clinic Staff Member

I worked for CHS in the first year of the study, 1989 to 1990, as Clinic Data Collector. I then worked for the FIT study (Fracture Intervention Trial), and came back to CHS in October 1996. I am currently working towards my Bachelor's degree in nursing, and will resume classes in the fall. I have twin daughters, Tiffany and Sharon, who are in fifth grade this year.

Corliss Cook, Data Entry / Clinic Assistant

Hi! I'm one of the many people helping in the collection of data. You may not see me when you come for your visit, but I feel I know all of you. I would like to say to those of you who participate in CHS or have had loved ones that participate, that you and your family members are very special to us. So I decided to use my space in this newsletter to say to you that it is truly "all in the heart."

Cindy Hall, RN, Clinic Staff Member

I have been with CHS four years. Before coming to Bowman Gray, I worked primarily in the area of critical care nursing, but I have also worked in counseling and nursing education. My son, J.C., who is eleven, is very proud to be a volunteer for CHS. After living all over the country, it's nice to settle back in North Carolina.

Vicki Guchemand, Receptionist

I have been with CHS since April 1996. I'm the one who calls you the day before your appointment to remind you of all the instructions, schedules our driver for transportation if needed, and greets you here at the clinic. I truly enjoy working here and chatting with all of you, and I look forward to seeing you all again at your next visit.

I'm married to Kevin and have a son, Ryan, 16, and a daughter, Lyndsay, 13. I enjoy flower gardening and landscaping, and am very involved with children's sports, particularly girls' soccer. We have only lived in this area for about two years, and traveling to soccer games around the state has been a great way to see North Carolina.

Note: Part 2 of *Your CHS staff*, profiling the rest of the Bowman Gray team, will be published in the next issue of *CHS Heartbeat*.

Your eyes: more than just “a window to the soul”

Kathy Miner, Senior Photo Grader, CHS Retinal Reading Center

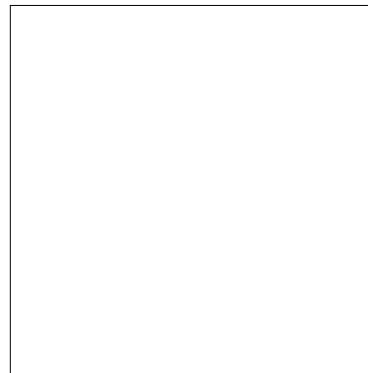
Retinal photography is a new component of your annual CHS exam. Some of you may be wondering why it has been added, what its impact will be on you, and what will be done with the photographs.

The eye has poetically been called “a window to the soul.” Speaking more practically, it is also a window to the circulatory system. Most of the tissues within the eye are transparent — if they weren’t, you wouldn’t be able to see through them. By simply looking in through the lens of the eye, the small arteries and veins of the retina (the eye’s back layer) can be seen. By evaluating features of these retinal blood vessels, CHS investigators can discover their relation to vascular diseases in other parts of the body. This information may enable us not only to predict future cardiovascular disease outcomes, but also to develop prevention strategies.

The CHS decided to add retinal photography to its protocol largely because of interesting information gained from another large study called ARIC, or Atherosclerosis Risk in Communities. The ARIC study is examining 14,500 individuals over 10 years, looking at risk factors associated with atherosclerosis, or “hardening of the arteries,” and other types of heart disease. Participants in the ARIC study range from about 50 to 70 years of age. Like the CHS, the ARIC study involves many measurements and assessments, such as lung function testing, electrocardiograms, blood work, carotid artery ultrasounds, retinal photographs, and interviews about diet and lifestyle.

Because CHS participants are significantly older than those in the ARIC study, the information we gain from the retinal photography will provide the “next chapter” in a detailed body of data about cardiovascular disease. It will help us to better understand how visible changes in the small retinal blood vessels may predict subsequent development of heart attack and stroke.

Investigators have found that changes in the size of retinal arteries and in the way the vessels look where they cross each other are related to long-standing high blood pressure. Cigarette smoking is associated with narrow blood vessels. Ethnic, gender and age differences are also significant factors. An important question that still remains is whether narrowing of the retinal blood vessels is related to an increased risk of stroke. The retinal photographs taken in the CHS and the information they provide will add to this important body of knowledge.



This is an example of a retinal photograph.

Your individual CHS field center will explain the photography procedure to you in detail. No dilating drops will be used and your eye will not be touched. You will simply sit in a darkened room for about five minutes while the examiner gathers some general information, and then a photo will be taken using a special eye camera. Rolls of film will be processed as slides and sent to the Retinal Reading Center for analysis.

Located in Madison, Wisconsin, the Retinal Reading Center is part of the Department of Ophthalmology and Visual Sciences at the University of Wisconsin. At the center, trained examiners, or “graders”, evaluate the photos for retinal features. The photographs are identified only by a number, so the graders don’t have any information about

Continued on next page

individual participants.

Two types of reading, or "grading", are done. One is performed on a light box, an upright fluorescent panel, using the original color slide and a hand-held magnifier. The other reading, referred to as "image-processing grading", involves scanning the original slide into a computer system, enhancing and sharpening the image for focus and contrast, then zooming in on a specified area and measuring the diameter of each retinal artery and vein.

The light box grading looks for narrowing in the arteries, abnormalities in the vessel crossings, and any other ocular conditions present in the retina. The image-processing procedure analyzes for the relative diameter of the arteries to the vein; Since we know that normal retinal arteries are about 80% of the size of retinal veins, we can detect any gener-

alized narrowing of the arteries.

Other information which may be gleaned from the photographs includes evidence of glaucoma, diabetes, macular degeneration, certain systemic diseases, and retinal detachments. The large majority of the photographs will show perfectly normal retinas. Any significant abnormal conditions will be promptly reported to the field centers.

After both types of grading are completed, the photographs will be kept at the Retinal Reading Center for future reference. The center will receive only one photograph of a small portion of the retina of one eye, so it has limited information on the overall health of your eyes. For this reason, retinal photography does not replace the need for a routine eye examination.

**CHS Heartbeat is produced by the Cardiovascular Health Study
Coordinating Center, University of Washington, Seattle, WA. It is supported
by the National Heart, Lung, and Blood Institute, NO1-HC-85079.**

Editor

Nicole Elger

Editorial Advisors

Annette Fitzpatrick, MA and David Siscovick, MD, MPH, *CHS Coordinating Center*
Peg Meyer, RN, MEd, *University of Pittsburgh*

CARDIOVASCULAR HEALTH STUDY
CHS Coordinating Center
University of Washington
1501 Fourth Avenue, Suite 2105
Seattle, WA 98101

Nonprofit Organization
U.S. Postage
PAID
Seattle, WA
Permit No. 62

ADDRESS CORRECTION REQUESTED