George W. Comstock Center for Public Health Research and Prevention

JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH

1100 Dual Highway, Hagerstown, Md.
Grand Opening
1 June 2011
For more information about the Comstock Center, visit our website: http://www.jhsph.edu/comstockcenter

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Message from the Director

The George W. Comstock Center for Public Health Research and Prevention connects scientists, students, and staff at Johns Hopkins University with participants from Washington County, Maryland, to improve the evidence base for prevention efforts. The science aims to leave a lasting legacy of data and knowledge which will improve health and prevent disease in Washington County, nationally and internationally. We benefit from a 90-year tradition of innovation and collaboration between scientists and the community. New studies benefit from the data, experience and wisdom accumulated in previous studies.

Our new research facility brings together our original unit, based at the Health Department since 1962, with the downtown Hagerstown unit, which has operated since 1986. Having both units under one roof facilitates sharing expertise across the full range of research activities, from large mail surveys and specimen bank studies to in-depth clinical research studies. Our strengths in clinic-based studies of heart disease, diabetes, aging, cognition and sleep disorders will enhance our leading studies of cancer etiology as they require more in-depth molecular characterization. The new facility will efficiently use equipment across studies largely funded by the National Institutes of Health and welcome new leading science.

Our staff, led by Ms. Patricia Crowley and Ms. Judith Hoffman-Bolton, have a strong track record of collecting the highest quality data through an in-depth knowledge of the community and a commitment to respecting the participants’ VIP status as the people who donate their time and experience.

Faculty based at Johns Hopkins University are committed to designing the best possible studies and obtaining the funding to make them happen. I strongly believe that data are the gift that keeps on giving and thank everyone for their help in allowing us to advance prevention now and in the future.

[Signature] Josfi Corish
A Brief History of Health Research Collaboration in Washington County

In 1921, the Johns Hopkins University’s Washington County Health Demonstration started. One of the first studies was the series of Hagerstown Morbidity Surveys, the first truly representative community health surveys. Other pioneering research studies were studies on child growth and dental caries in the 1930s.

In 1957, the National Cancer Institute established the Environmental Cancer Field Research Project in a building adjacent to the health department. However, when, after several years of data collection, none of the expected associations of cancers with geography developed, the National Cancer Institute decided to terminate the study and the building sat idle.

In 1962, the Johns Hopkins Training Center for Public Health Research was established. Early support of the Center came from a contract with the National Cancer Institute to conduct a private health census of the county to collect personal and housing information that would allow completion of the study of geographic and residential distribution of cancer cases. This 1963 census of ~90,000 residents was the basis for a series of health studies for many years and continues to be today. A large specimen bank study, Operation CLUE, was conducted in 1974 followed by a second county health census in 1975. The 1980s saw the launch of several large scale studies, including ARIC, CLUE II, and CHS. Following Dr. Comstock, the center was directed by Dr. Helzlsouer and since 2008 by Dr. Coresh.

The Comstock Center collaborates with local health agencies including Washington County Health Department, Washington County Hospital (now called Meritus Medical Center), and Western Maryland Hospital Center. Washington County is an outstanding place to conduct health studies. It has a state-of-the-art hospital and medical community. Most importantly, the population has a high interest in health research and willingness to participate in projects that will benefit the advancement of medical knowledge in order to improve the health of future generations and society as a whole.
Conducting Health Research in Washington County

Center staff based in Hagerstown, in the heart of Washington County, Maryland, have organized and collected data since 1921, accumulating a wealth of data that rivals or exceeds any other community in the world. Staff bring a wealth of experience and in depth knowledge of research methods and of the community. Several leaders stand out for their contributions over the years. CLUE I data collection in 1974, was organized by Knud Helsing working closely with Drs. Cedric Garland George Comstock and Abraham Lilienfeld. Sandra Clipp, MA, MPH led the staff operations during CLUE II, overseeing many studies from 1988 to 2010. Since 2010, Judith Hoffman-Bolton has overseen the staffing of the CLUE studies. Joel Hill, MS played a key role in establishing the research center in downtown Hagerstown working closely with Drs. Comstock and Szklo. She hired, trained and supervised the staff in that unit for over a decade and subsequently established the staffing structure for the MESA study and, although retired, continues to teach on the Baltimore campus. Joel Hill mentored numerous staff, including Ms. Crowley, in the management of large epidemiologic studies. Patricia Crowley, MS has led the ARIC and CHS staff since 1999. She is now the Center Operations Director in Hagerstown, coordinating activities of over 30 staff members. Over the decades the center’s staff numbers have varied from over 100 during the active phase of the CLUE studies to less than a dozen. Dr. Comstock’s observation that the center’s staff are outstanding remains as true as ever.

Washington County Sociodemographic and Health Facts

Total population: 147,430
Racial distribution: 83% White, 9% Black, 3% Latino, 5% Asian or other
Life expectancy: 78.1 years

Top 4 employment sectors:
(1) Services, (2) Retail trade, (3) Government, (4) Manufacturing

Primary Causes of Death, 2009

Source: Maryland Vital Statistics
http://www.cscc.unc.edu/aric/

The Atherosclerosis Risk in Communities (ARIC) study is a prospective epidemiologic study conducted in four U.S. communities, including Washington County, Maryland. Sponsored by the National Heart, Lung and Blood Institute, ARIC was originally designed to investigate the etiology and natural history of atherosclerosis, the etiology of clinical atherosclerotic diseases, and variation in cardiovascular risk factors, medical care and disease by race, gender, location and date. ARIC data have also become an important resource for the study of diabetes, kidney disease, and other chronic diseases. Future research will examine the vascular basis of aging-related dementia and cancer.

ARIC includes two components: cohort and community surveillance. The cohort component began in 1987. Each field center randomly selected and recruited approximately 4,000 individuals ages 45 to 64 from a defined population in their community. A total of 15,792 participants received an extensive examination, including medical, social and demographic data. These participants were reexamined every three years, with the second visit in 1990-92, the third in 1993-95, and the fourth in 1996-98. Follow-up occurs yearly by telephone to assess participants’ health status, including hospitalization. A fifth follow-up visit will begin in June 2011 and continue through 2013.

The community surveillance component is designed to measure the community-wide occurrence of hospitalized myocardial infarction, coronary heart disease deaths in men and women aged 35 to 84 years, and since 2005 heart failure (among those aged 55 years and older).

To date, the ARIC project and ancillary studies have led to more than 800 articles in peer-reviewed journals, and numerous abstracts and other summary reports of ARIC data at various national and international scientific conferences and meetings. The dedication of staff and participants has led to a follow-up rate of 93%. 
Glycated Hemoglobin, Diabetes, and Cardiovascular Risk in Nondiabetic Adults

E Selvin • MW Steffes • H Zhu • K Matsushita
L Wagenknecht • J Pankow • J Coresh • FL Brancati

Background: Fasting glucose is the standard measure used to diagnose diabetes in the United States. Recently, glycated hemoglobin was also recommended for this purpose.

Methods: We compared the prognostic value of glycated hemoglobin and fasting glucose for identifying adults at risk for diabetes or cardiovascular disease. We measured glycated hemoglobin in whole-blood samples from 11,092 black or white adults who did not have a history of diabetes or cardiovascular disease and who attended the second visit (1990–1992) of the ARIC study.

Results: The glycated hemoglobin value at baseline was associated with newly diagnosed diabetes and cardiovascular outcomes. Glycated hemoglobin and death from any cause were found to have a J-shaped association curve. These associations remained significant after adjustment for the baseline fasting glucose level.

Conclusions: In this community-based population of nondiabetic adults, glycated hemoglobin was similarly associated with a risk of diabetes and more strongly associated with risks of cardiovascular disease and death from any cause as compared with fasting glucose.
http://www.chs-nhlbi.org/
The Cardiovascular Health Study (CHS) is an observational study of risk factors for cardiovascular disease in adults 65 years or older that is funded by the National Heart, Lung and Blood Institute. The study is conducted four field centers, including Washington County, Maryland.

Starting in 1989, and continuing through 1999, participants underwent annual extensive clinical examinations. Measurements included traditional risk factors such as blood pressure and lipids as well as measures of subclinical disease, including echocardiography, carotid ultrasound, and cranial magnetic-resonance imaging (MRI).

At six-month intervals between clinic visits, and once clinic visits ended, participants were contacted by phone to ascertain hospitalizations and health status. The main outcomes are coronary heart disease, angina, heart failure, stroke, transient ischemic attack, claudication, and mortality. Participants continue to be followed for these events.

In 2006, surviving members of the cohort were invited to the clinic to participate in the “CHS All Stars” Study which examined physical and cognition function.

To date, more than 600 research papers from CHS have been published and more than 120 ancillary studies are ongoing or complete. Participants, now 86-100+ years, delight the staff with their willingness to be interviewed over the telephone semi-annually so that we can learn about the health and hospitalizations of this older population.
Objectives: To evaluate shared and unique risk factors for maintaining physical and cognitive function into the ninth decade and beyond.

Participants: One thousand six hundred seventy-seven participants in the Cardiovascular Health Study All Stars Study, assessed in 2005/06. Median age was 85 (range 77-102), 66.5% were women, and 16.6% were black.

Measurements: Intact function was defined as no difficulty with any activities of daily living and a score of 80 or higher on the Modified Mini-Mental State Examination. Results: Of the 1,677 participants evaluated in both domains, 891 (53%) were functionally intact. Continuous measures of function, including the Digit Symbol Substitution Test and gait speed, showed that all groups, including the most functional, had declined over time. The functional group had less decline but also tended to have higher starting values and a higher baseline health profile. Women and individuals with greater weight had higher rates of physical impairment but not cognitive impairment. Risk factors common to both types of impairment included cardiovascular disease and hypertension.

Conclusion: Intact function was found in only approximately half of these older adults in the ninth decade and beyond. High baseline function and low vascular disease risk characterized functional aging.
The CLUE studies were conducted in 1974 and 1989, under the direction of Dr. George Comstock with funding from the National Cancer Institute. The name of the cohorts were adopted from the campaign slogans *Give Us a Clue to Cancer and Heart Disease*.

Volunteer participants were recruited across the county and surrounding communities. In 1974, approximately 26,000 participants enrolled from May to November. Blood samples were processed and stored as serum.

In 1989, approximately 33,000 individuals participated in CLUE II which was conducted under the leadership of Drs. Helzlsouer and Comstock. Plasma and buffy coat were stored from the blood samples, and toenail samples and dietary questionnaires were also collected. In 1996, the CLUE II cohort began active follow-up with periodic mailing of health questionnaires. Questionnaires have been mailed to participants every two to three years. A current pilot study is examining the feasibility of collecting survey data via phone and web in addition to mailings.

More than 9,100 of the participants in CLUE I also participated in CLUE II, with 8,400 forming the Odyssey Cohort.

The CLUE studies have contributed to the understanding of cancer as well as other chronic diseases and are an integral member of the Cohort Consortium of the National Cancer Institute. Clue staff continues to meticulously steward the datasets and large specimen bank, which is housed at Western Maryland Hospital Center.
**Background:** In vitro, human isoenzymes encoded by genes homozygous for the ADH1C1 or ADH1B2 alleles metabolize ethanol to acetaldehyde at a faster rate than those homozygous for the ADH1C2 or ADH1B1 allele. Because alcohol is a known risk factor for breast cancer, we evaluated the joint association of genetic variants in ADH and alcohol consumption in relation to breast cancer.

**Methods:** A nested case–control study of 321 cases and matched controls was conducted. Five single nucleotide polymorphisms (SNPs) in the ADH1C and ADH1B genes were genotyped.

**Results:** Women who drank alcohol tended to be at an increased risk of developing breast cancer compared with those who did not drink (OR 1.40, 95% CI 0.97–2.03), particularly those who were premenopausal at the time of breast cancer diagnosis (OR 2.69, 95% CI: 1.00–7.26). Of the known functional alleles, breast cancer risk was not significantly increased among carriers of at least 1 ADH1C1 or ADH1B2 allele, when compared with those homozygous for the genotype at each locus. However, breast cancer risk tended to be lower among women who inherited the G allele at ADH1B IVS11896A4G (OR 0.62, 95% CI 0.37–1.04). Overall haplotype frequencies were not significantly different between cases and controls.

**Conclusions:** In this study low levels of alcohol are associated with a modest increase in breast cancer risk that is not altered by known functional allelic variants of the ADH1B and 1C gene. The protective association conferred by the G allele at ADH1B IVS11896A4G needs further evaluation.

<table>
<thead>
<tr>
<th>Genotype</th>
<th>Nondrinker</th>
<th></th>
<th></th>
<th></th>
<th>Drinkers</th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cases/controls</td>
<td>OR</td>
<td>95% CI</td>
<td></td>
<td>Cases/controls</td>
<td>OR</td>
<td>95% CI</td>
<td></td>
</tr>
<tr>
<td>Functional</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADH1C (Exon-56A&gt;G)</td>
<td>2,2</td>
<td>25/30</td>
<td>1.00(ref.)</td>
<td></td>
<td>14/19</td>
<td>0.86</td>
<td>(0.36, 2.05)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2,1</td>
<td>122/154</td>
<td>0.96</td>
<td>p interaction = 0.16</td>
<td></td>
<td>75/52</td>
<td>1.63</td>
<td>(0.86, 3.11)</td>
</tr>
<tr>
<td></td>
<td>1,1</td>
<td>100/126</td>
<td>0.88</td>
<td>p interaction = 0.23</td>
<td></td>
<td>91/15</td>
<td>0.75</td>
<td>(0.24, 2.39)</td>
</tr>
<tr>
<td></td>
<td>1,2</td>
<td>120/152</td>
<td>1.00(ref.)</td>
<td></td>
<td>77/67</td>
<td>1.44</td>
<td>(0.95, 2.17)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2,1</td>
<td>5/6</td>
<td>0.96</td>
<td>(0.25, 3.26)</td>
<td>p interaction = 0.23</td>
<td>1/1</td>
<td>0.60</td>
<td>(0.69, 52.9)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADH1C (IVS6 + 10G&gt;A)</td>
<td>A,G,A,A</td>
<td>58/105</td>
<td>1.00(ref.)</td>
<td></td>
<td>24/21</td>
<td>1.09</td>
<td>(0.53, 2.21)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A,G,A,G</td>
<td>57/88</td>
<td>0.67</td>
<td>(0.40, 1.11)</td>
<td>p interaction = 0.30</td>
<td>47/40</td>
<td>1.17</td>
<td>(0.66, 2.06)</td>
</tr>
<tr>
<td>ADH1B (IVS1 + 896A&gt;G)</td>
<td>A,A</td>
<td>59/49</td>
<td>1.00(ref.)</td>
<td></td>
<td>31/26</td>
<td>1.04</td>
<td>(0.54, 2.02)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A,G/G,G</td>
<td>64/104</td>
<td>0.57</td>
<td>(0.34, 0.94)</td>
<td>p interaction = 0.12</td>
<td>45/35</td>
<td>1.08</td>
<td>(0.65, 2.14)</td>
</tr>
</tbody>
</table>

OR, odds ratio, adjusted for matching factors (baseline menopausal status and age); CI, confidence interval; rs, identifier used by the NCI SNP 500 data base (http://snp500cancer.nci.nih.gov/home).
The Ginkgo Evaluation of Memory (GEM) Study is an investigational research study sponsored by the National Center for Complementary and Alternative Medicine, the National Institute on Aging, and the National Heart, Lung, and Blood Institute. For the Comstock Center, this study was the first the trial of a “drug” (in this case, a commonly taken supplement), as opposed to an observational study.

The goal of this study was to find out if medicine made from the plant Ginkgo biloba could prevent or delay the changes in memory, thinking and personality that occur as people get older. Doctors refer to these changes as "dementia," the most well-known type being Alzheimer's disease. Investigators enrolled more than 3,000 people in this study at five field sites. Half took pills that contain Ginkgo biloba, and half took a placebo. After five years, when the study was completed, the two groups were compared to see if there were differences in how memory, thinking and personality have changed, and to see if Ginkgo biloba has been effective in preventing these changes.

The study concluded that taking Ginkgo biloba (120 mg twice daily) did not slow cognitive decline in older adults and did not reduce rates of hypertension, cardiovascular disease or cancer. This is an important finding that could prevent money and resources being spent on an interventional that is not effective and guide science in more fruitful directions.
**Ginkgo biloba** for Preventing Cognitive Decline in Older Adults: A Randomized Trial

BE Snitz • ES O’Meara • MC Carlson • AM Arnold
DG Ives • SR Rapp • J Saxton • OL Lopez • LO Dunn
KM Sink • ST DeKosky

**Context** *Ginkgo biloba* is taken frequently, but evidence is lacking regarding its effect on long-term cognitive functioning.

**Design, Setting, and Participants** A randomized, double-blind, placebo-controlled clinical trial of 3069 community dwelling participants aged 72 to 96 years was conducted in 6 academic medical centers in the United States between 2000 and 2008.

**Intervention** Twice-daily dose of 120-mg extract of *G biloba* (n=1545) or identical appearing placebo (n=1524).

**Main Outcome Measures** Rates of change over time in the Modified Mini-Mental State Examination, in the cognitive subscale of the Alzheimer Disease Assessment Scale, and in neuropsychological domains of memory, attention, visual-spatial construction, language, and executive functions, based on sums of z scores of individual tests.

**Results** Annual rates of decline in z scores did not differ between *G biloba* and placebo groups in any domains. For the 3MSE and ADAS-Cog, rates of change varied by baseline cognitive status (mild cognitive impairment), but there were no differences in rates of change between treatment groups (for 3MSE, *P*=.71; for ADAS-Cog, *P*=.97).

**Conclusion** Compared with placebo, the use of *G biloba*, 120 mg twice daily, did not result in less cognitive decline in older adults with normal cognition or with mild cognitive impairment.

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**Table 2.** Results of Linear Mixed Models for Each Cognitive Domain and Global Cognition

<table>
<thead>
<tr>
<th>Cognitive Domain</th>
<th>Treatment (G biloba) Effect: Overall Difference in z Scores vs Placebo, Mean (95% CI)</th>
<th>Annual Rate of Change in z Scores, Mean (95% CI)</th>
<th>Treatment × Time Interaction: Annual Difference in Rates of Change Between G biloba and Placebo, Mean (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>0.034 (-0.019 to 0.068)</td>
<td>0.041 (0.032 to 0.050)</td>
<td>0.002 (-0.010 to 0.013)</td>
</tr>
<tr>
<td><em>P</em> value</td>
<td>.21</td>
<td>&lt;.001</td>
<td>.79</td>
</tr>
<tr>
<td>Attention</td>
<td>0.007 (-0.012 to 0.086)</td>
<td>0.048 (0.041 to 0.054)</td>
<td>-0.004 (-0.013 to 0.005)</td>
</tr>
<tr>
<td><em>P</em> value</td>
<td>.14</td>
<td>&lt;.001</td>
<td>.37</td>
</tr>
<tr>
<td>Visuospatial abilities</td>
<td>0.038 (-0.017 to 0.093)</td>
<td>0.118 (0.108 to 0.128)</td>
<td>-0.011 (-0.022 to 0.001)</td>
</tr>
<tr>
<td><em>P</em> value</td>
<td>.17</td>
<td>&lt;.001</td>
<td>.08</td>
</tr>
<tr>
<td>Language</td>
<td>-0.041 (-0.093 to 0.011)</td>
<td>0.041 (0.033 to 0.048)</td>
<td>0.006 (-0.005 to 0.014)</td>
</tr>
<tr>
<td><em>P</em> value</td>
<td>.13</td>
<td>&lt;.001</td>
<td>.33</td>
</tr>
<tr>
<td>Executive functions</td>
<td>0.013 (-0.042 to 0.069)</td>
<td>0.089 (0.082 to 0.096)</td>
<td>0.003 (-0.006 to 0.013)</td>
</tr>
<tr>
<td><em>P</em> value</td>
<td>.64</td>
<td>&lt;.001</td>
<td>.49</td>
</tr>
<tr>
<td>Global cognition</td>
<td>0.015 (-0.018 to 0.047)</td>
<td>0.071 (0.065 to 0.076)</td>
<td>-0.002 (-0.009 to 0.005)</td>
</tr>
<tr>
<td><em>P</em> value</td>
<td>.38</td>
<td>&lt;.001</td>
<td>.65</td>
</tr>
</tbody>
</table>

Abbreviations: CI, confidence interval; G biloba, Ginkgo biloba.

*Higher coefficients indicate worse test performance. Adjusted for age, sex, nonwhite race, years of education, mild cognitive impairment, and depression score at baseline. Scores are derived from the mean of 2 tests for each cognitive domain, with global cognition representing the mean of the 5 cognitive domain scores. See Table 3 for estimated annual rates of change for each individual test.* As described in the Methods, test scores were transformed so that higher scores were worse and skewed measures were log-transformed. Scores were then standardized into z scores. Annual rates of change for each domain are presented. Results of the other components of the model are shown in the eTable.
Under the leadership of Dr. Naresh Punjabi, through funding from the National Heart, Lung and Blood Institute, a series of studies are being conducted to examine the relationship between sleep apnea, chronic disease and health outcomes.

The following studies have been completed, and publications are ongoing:

- GlycOSA study, a multicenter randomized controlled trial to assess the effectiveness of continuous positive airway pressure in improving glycemic control in type 2 diabetic patients with newly diagnosed obstructive sleep apnea.
- The Sleep Heart Health Study, a multicenter cohort study to determine cardiovascular and other consequences of sleep-disordered breathing.
- The Heart Biomarker Evaluation in Apnea Treatment (HeartBEAT) study, a multicenter randomized controlled trial to compare the effects of nocturnal supplemental oxygen and positive airway pressure versus optimized medical management on biomarkers of cardiovascular risk.
- SOMNOS (Study of sleep, obesity and metabolism), a study to determine how moderate sleep apnea affects glucose metabolism.

Researchers are currently recruiting patients to participate in SOMNOS 2, which will examine whether abnormalities in sleep due to a condition called sleep apnea are related to glucose metabolism and how use of positive airway pressure (PAP) affects metabolism.
Sleep-Disordered Breathing and Mortality: A Prospective Cohort Study

NM Punjabi • BS Caffo • JL Goodwin • DJ Gottlieb
AB Newman • GT O’Connor • DM Rapoport • S Redline
HE Resnick • JA Robbins • E Shahar • ML Unruh • JM Samet

Background: Sleep-disordered breathing is a common condition associated with adverse health outcomes including hypertension and cardiovascular disease.

Methods and Findings: We prospectively examined whether sleep-disordered breathing was associated with an increased risk of death from any cause in 6,441 men and women participating in the Sleep Heart Health Study. The average follow-up period for the cohort was 8.2 years during which 1,047 participants (587 men and 460 women) died. Compared to those without sleep-disordered breathing, the fully adjusted hazard ratios for all-cause mortality in those with mild, moderate, and severe sleep-disordered breathing were 0.93 (95% CI: 0.80–1.08), 1.17 (95% CI: 0.97–1.42), and 1.46 (95% CI: 1.14–1.86), respectively. Stratified analyses by sex and age showed that the increased risk of death associated with severe sleep-disordered breathing was statistically significant in men aged 40–70 y (hazard ratio: 2.09; 95% CI: 1.31–3.33). Measures of sleep-related intermittent hypoxemia, but not sleep fragmentation, were independently associated with all-cause mortality. Coronary artery disease–related mortality associated with sleep disordered breathing showed a pattern of association similar to all-cause mortality.

Conclusions: Sleep-disordered breathing is associated with all-cause mortality and specifically that due to coronary artery disease, particularly in men aged 40–70 years with severe sleep-disordered breathing.
Comstock Center Organizational Chart

**Director:** Josef Coresh

**Health Monitoring Unit**
- Unit Operations Supervisor: Judith Hoffman-Bolton

**Surveillance & Disease Prevention Unit**
- Operations Director: Patricia Crowley

**Training & Public Health Activities**
- Director: Moyses Szklo

**CLUE Studies Co-Directors:**
- Kala Visvanathan & Linda Kao

**ARIC V5+NCS**
- PI: Coresh
- Neurology: Gottesman

**CHS PI:**
- Chaves

**GEM PI:**
- Carlson
- Punjabi

**Staff**
- Database Specialist
- Admin Coordinator
- Research Program Assistant
- Research Program Coordinator

**Clinics Staff**
- ARIC Visit 5- 2011-2013
  - ~10 staff members
  - SHHS/SOMNOS CLINIC
    - Project Coordinator: Melissa Minotti
    - 1 Clinic Staff, 1 Nurse, 2 physicians from JHU

**Medical Records Abstraction**
- 6-9 abstractors cross trained in other field center activities

**Cardiac Evaluation**
- Echocardiography
- Pulse Wave
- Velocity
- Blood pressure

**JHSPH Epidemiology Dept.**
- Administration Support & Staff
  - Kelly Welsh

**Clinical Assessment**
- Psychometric administration (3 interviewers)
- Neurologic examination (2 nurses)

**Telephone Interviewing**
- 4-6 interviewers

**Study Specific Operations Committees**
- have authority within each study (e.g. CLUE Serology Committee)

**Research Advisors:**
- Helzlsouer, Alberg

**Community Advisors:**
- Earl Stoner (Wash Co Health Dept.)
- Allen Twigg (Meritus Med Ctr)

**Affiliated Faculty:**
- Principal Investigators
- Public Health Leaders

**Data & Administration**
- Admin Coordinator/Data IT Support: Automated Equipment Inc.
Mission
To collect the highest quality data with the goal of advancing disease prevention by bringing together participants, staff, students and scientists in a partnership between Johns Hopkins University and Washington County, Maryland.

Core Values
– Participant respect as the source and ultimate beneficiary of prevention research
– Data quality, integrity and privacy
– Science in the service of people: Win some victories for humanity, big or small

Goals for 2011
– Complete transitions in key studies: the ARIC 25-year follow-up and a CLUE health status update.
– Develop new studies in public health priority areas.
– Settle into the 1100 Dual Highway facility and creatively utilize its full potential.
– Start a prevention lecture series for a broad audience and teach a fundamentals of epidemiology course to local health researchers
– Continue to expand the network of active investigators writing grants and high impact publications
– Review long term goals and raise funds to secure the future of the center
– Complete George Comstock Professorship fund drive
CORE FACULTY
Josef Coresh, MD, PhD
Michelle Carlson, PhD
Paulo H. Chaves, MD, PhD
Rebecca Gottesman, MD, PhD
W. H. Linda Kao, PhD, MHS
Kunihiro Matsushita, MD, PhD
Elizabeth Platz, ScD, MPH
Naresh M. Punjabi, MD, PhD
Kala Visvanathan, MBBS, MHS

ASSOCIATES
Anthony Alberg, PhD, MPH,
(Medical University of South Carolina)
Brad Astor, PhD, MPH, MS
Frederick Brancati, MD, MHS

AFFILIATED FACULTY AT JOHNS HOPKINS
Marilyn Albert, MD (Neurology)
Dan Arking, PhD (Human Genetics)
Cheryl Anderson, PhD, MS (Epidemiology)
Lawrence Appel, MD, MPH (Medicine)
Alan Baer, MD (Rheumatology)
Terri Beaty, PhD (Epidemiology)
L. Ebony Boulware, MD, MPH (Medicine)
Kathryn Carson, ScM (Epidemiology)
David Celentano, ScD, MHS (Epidemiology)
Aravinda Chakravarti, PhD (Human Genetics)
Jeanne Clark, MD, MPH (Medicine)
Ciprian Crainiceanu, PhD (Biostatistics)
Marie Diener-West, PhD (Biostatistics)
Margaret Fallin, PhD (Epidemiology)
Linda Fried, MD, MPH (Geriatrics)
Lisa Gallicchio, PhD (Epidemiology)
Allan Gelber, MD, MPH (Rheumatology)
Eliseo Guallar, MD, DrPH (Epidemiology)
Sherita Hill Golden, MD, MHS (Medicine)

STUDENTS: Johns Hopkins Bloomberg School of Public Health,
School of Medicine

Core faculty - Principal Investigators or supervisors of major projects at the Comstock Center in Hagerstown.
Associates - Principal Investigators or supervisors of major projects using Comstock Center data or staff where the main project is based outside Hagerstown.
Affiliated faculty - Investigators playing a major role in projects or papers using data generated at Comstock Center.
George Wills Comstock MD DrPH (1915–2007) was a world-renowned public health physician, epidemiologist and educator. He obtained his medical degree from Harvard in 1941, joined the U.S. Public Health Service in 1942, and during 21 years of service conducted seminal community-based research into tuberculosis control. In 1962, Dr. Comstock founded the Johns Hopkins Training Center for Public Health Research and Prevention in Washington County, Maryland.

For the next 42 years, Comstock led research studies on numerous public health problems, primarily cancer and heart disease. Dr. Comstock also served as editor-in-chief of the American Journal of Epidemiology from 1979 to 1988 and was on faculty of the Johns Hopkins Bloomberg School of Public Health for 50 years.

In 2005, the Hopkins center in Hagerstown was renamed The George W. Comstock Center for Public Health Research and Prevention. Dr. Comstock frequently quoted these words from Horace Mann: “I beseech you to treasure up in your hearts these my parting words: Be ashamed to die until you have won some victory for humanity.” This struck him as the main purpose of living; as Comstock said, “Most of us aren’t going to win any big victories, but we can win little ones every day, and they mount up.”