



Healthy Aging in Neighborhoods of Diversity across the Life Span

What is the purpose of HANDLS? Healthy Aging in Neighborhoods of Diversity across the Life Span (HANDLS) studies health concerns in Baltimore communities. We started our study in 2004 by inviting African American and White adults living in Baltimore to participate in a long-term study about their health. You are among 3720 people who completed at least one examination. We work with the same participants over many years. This helps us understand how peoples' bodies change over time. We want to discover the causes of good health, find better ways to prevent and treat disease, and understand why some adults have more severe diseases than others. Differences in age, gender, race, and socioeconomic status (SES) affect health outcomes, which we call health disparities. At HANDLS, we pay close attention to health disparities.

What is an MRV? HANDLS appointments take place on 3 mobile medical research vehicles, called MRVs. There are examination rooms and a lab inside the MRVs. The MRVs look like medical offices on wheels.

Where is HANDLS located? 5225 Hamilton Avenue, Baltimore, MD 21206. HANDLS offers free round-trip transportation to your appointment. Free on-site parking is available if you prefer to drive.

You will receive up to \$300.00 for your participation

What tests will I receive? We will do a PCR Test for COVID. We also do blood tests for glucose, kidney, liver, and thyroid function, anemia and iron levels, and body inflammation. In addition, we do urine tests for diabetes and kidney function. We also test your muscle strength, your vision, and your thinking ability. We will give you results from your EKG and bone density and body composition. We will also give you the results of the other clinical tests you get during your visit. You may share this information with your doctor so you can save money. HANDLS staff explain these tests to you during a process called informed consent. You are welcome to ask

questions and decide whether to participate in our study. We will always respect your decision.

Will I receive test results? We will mail your Participant Report Packet and resource guide about a month after your examination. If your results indicate a medical problem, the resource guide may help you with next steps. Our physician will call you to discuss your lab results. HANDLS staff do not provide ongoing medical treatment but they can assist you in finding follow up care. If you wish, with your permission, HANDLS can share your results with your healthcare provider.

Is HANDLS taking COVID-19 precautions? HANDLS staff wear masks and are fully vaccinated. When you arrive at the MRVs, you will be given a rapid COVID-19 test. If you test negative, we will proceed with your appointment. If you test positive, you will be rescheduled. You will be the only HANDLS participant on an MRV. HANDLS staff continually sanitize equipment and testing areas.

HANDLS tests give you valuable information about your health.

Why should I participate? These tests give you valuable information about your health. Many tests we offer are not part of a standard visit with your healthcare provider. Our tests are free of charge. Your HANDLS participation may help others. Studying health disparities can lead to resources, support, and care for people who need it most.

Will I be paid? You will receive up to \$300.00 for your participation. You will receive an ATM debit card once your visit is completed. You can take the card to an ATM machine to withdraw cash, or you can use it like a debit card to pay for goods and services.

How can I make an appointment? If you are interested in participating, please reach out. Call 1-877-677-9538 or email handls@mail.nih.gov to make an appointment.

HANDLS Impact. HANDLS staff look for trends among participants' test results. They use this information to write papers. These educate the medical community throughout the country. Have you wondered what HANDLS has discovered because of your participation? Here are some HANDLS findings that might interest you:

Nutrition. Nutrition and food intake affect overall health. HANDLS participants who regularly skipped breakfast consumed more added sugar, fewer servings of fruit and whole grains, and had lower nutrient intake. Participants who regularly ate breakfast away from home had increased intakes of fat, energy, and sodium. Participants who regularly ate breakfast at home had the highest diet quality.

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Strength. Physical and mental strength are crucial for healthy aging. Eating anti-inflammatory foods and avoiding cigarettes and illicit drugs were linked to improved physical and mental strength. Eating anti-inflammatory foods such as fruit, vegetables, whole grains, nuts, and seafood are key elements of the the Mediterranean or DASH (Dietary Approaches to Stop Hypertension) diets. Among HANDLS participants, men with diets rich in anti-inflammatory foods showed an improvement in mental strength.

Kidney disease: HANDLS found that not having enough to eat contributes to kidney disease, especially for participants with diabetes or hypertension. HANDLS also found greater risk for chronic kidney disease due to poverty status in African American but not White participants.

Sleep. HANDLS found a relationship between vitamin D and sleep quality, which is related mostly to sun exposure and not using supplements. HANDLS also found that one-quarter of participants get less than 8 hours of sleep each night, less than the recommended number of hours. African American and White participants had similar sleep times when they resided in similar environments.

Neighborhood Social Cohesion (NSC). NSC refers to relationships, values, and norms of residents in a neighborhood. NSC benefits health through access to resources and social support. Higher NSC is linked to improved cardiovascular health. HANDLS participants who reported higher levels of neighborhood social cohesion reported less cigarette use, healthier eating habits, and increased physical activity.

Frailty. Frailty is a risk factor for disability, hospitalization, and mortality. Early detection may delay disability. Among HANDLS participants, frailty was more common among women and people taking multiple prescriptions. White participants aged 45-54 were more likely to be frail than African American participants of the same age. The results were similar among African Americans and Whites ages 55-64. Living below poverty more than doubled the odds of frailty.

Participants with high levels of pain also had difficulty with physical functioning

Pain. Pain is related to higher levels of disability and a loss of independence. HANDLS found that participants with high levels of pain also had difficulty with physical functioning. People who reported depressive symptoms were more likely to report pain. Participants who reported pain were more likely older, female, and have other diseases. While chronic pain is more prevalent in White Americans, African American participants experience more severe chronic pain, report greater pain-related disabilities, and are under treated for pain. Chronic pain is more prevalent in women than men.

HANDLS used the following tests you completed during your appointment to write these papers: medical history, physical examination, physical performance, questionnaire, specimen collection, ankle-brachial index (ABI), 24-hour dietary recall, cognitive testing.

If you would like to see a complete list of HANDLS publications, please visit <https://handls.nih.gov/03Pubs.htm>.