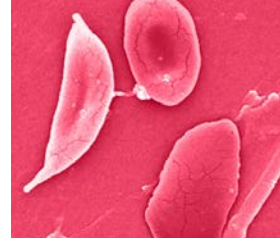




National Heart, Lung, and Blood Institute



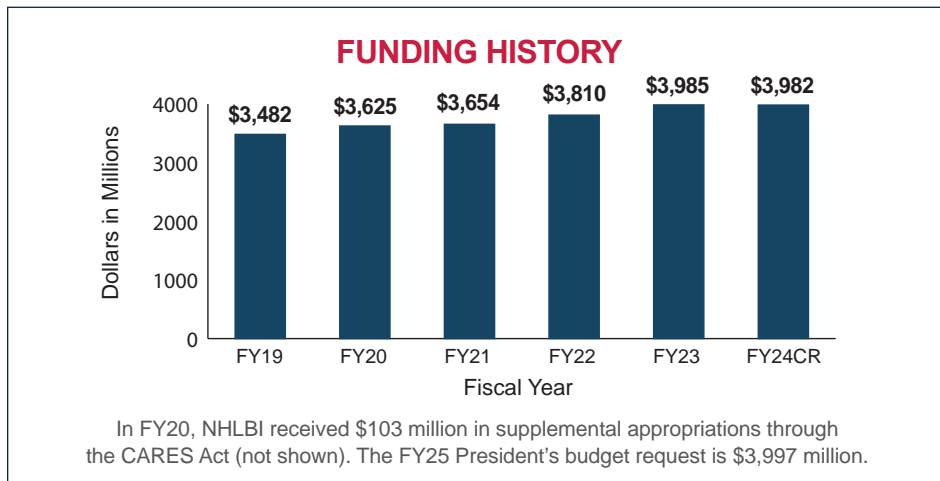
December 2023

ABOUT NHLBI

- NHLBI is the nation’s leader in supporting research on the prevention and treatment of heart, lung, blood, and sleep (HLBS) disorders.
- We were established in 1948 to address rising rates of cardiovascular disease (CVD), the nation’s leading cause of death.
- Our mission has expanded to lead NIH research efforts in lung diseases, including asthma and chronic obstructive pulmonary disease (COPD).
- We lead research on blood transfusion and blood diseases, such as sickle cell disease.
- In 1993, we became the home for the National Center on Sleep Disorders Research (NCSDR), which coordinates NIH programs related to sleep biology.
- NHLBI’s research advances scientific knowledge, improves public health, and saves lives.



Director Profile: Gary H. Gibbons, M.D., is director of the National Heart, Lung, and Blood Institute (NHLBI). He received his M.D. from Harvard University Medical School and has served on the faculty at Harvard, Stanford University, and Morehouse School of Medicine in Atlanta.



Facts and Figures	
Full-Time Staff	943
RPG Awards	1,031
Principal Investigators	1,393
ESI Success Rates	31.4%
K Award Success Rates	49.1%

Major NHLBI Initiatives

NHLBI continues to be dedicated to understanding and addressing the long-term effects of the COVID-19 pandemic. Along with the National Institute of Neurological Disorders and Stroke and the National Institute of Allergy and Infectious Diseases, we lead NIH’s Researching COVID to Enhance Recovery (RECOVER) Initiative. In 2023, the RECOVER Initiative launched and opened enrollment for Phase 2 clinical trials to evaluate at least four potential treatments for Long COVID, with clinical trials to test at least seven more treatments expected in the coming months.

We support research toward preventing or managing cardiovascular risk

factors and CVD across a woman’s lifespan, especially during pregnancy. NHLBI is focused on moving evidence-based interventions proven to support maternal health into broader practice. Our Maternal Health Community Implementation Project (MH-CIP) is a community-driven initiative that studies how specific interventions, such as regular blood pressure readings, improve women’s heart health and reduce maternal mortality.

NHLBI leverages innovative technology and data collection techniques to understand, diagnose, treat, and prevent complex health issues. We explore the underlying

biomolecular mechanisms of HLBS conditions and the complex interactions among individual biology, genetic inheritance, environment, and lifestyle. By leveraging cutting-edge technologies to understand the intersection of these influences, NHLBI continues to advance the transformative power of precision medicine — providing the right treatment or prevention approach to the right individual at the right time.

Moving into the future, we plan to expand both our community-engaged research into rural communities and our use of data science approaches for precision health.



National Heart, Lung,
and Blood Institute



Accomplishments in...

Heart Health

Among a large cohort of predominantly low-income Black and White participants, heart failure incidence was 21% higher among adults living in rural areas.

Compared with usual care, adopting home blood pressure monitoring was estimated to reduce myocardial infarction cases and stroke cases. Home monitoring averted more cardiovascular events in women, non-Hispanic Black people, and rural residents.

A new approach was developed to reduce the circumference of the heart's left ventricle to overcome previous surgical limitations and increase survival rates in surgery to address dilated cardiomyopathy.

Lung Health

Through the Air You Wear Challenge, NHLBI aimed to broadly stimulate the research and development of processes and technologies designed to improve the accessibility, efficacy, and usability of supplemental oxygen.

Researchers documented the first genome-wide characterization of patterns of gene expression changes in peripubertal males and females.

Sleep Health

NHLBI-funded researchers have developed a more accurate tool for diagnosing obstructive sleep apnea, which effectively assessed the severity of the condition, and predicted mortality associated with cardiovascular diseases.

A recent study conducted by NHLBI-supported researchers examined the link between the body's circadian rhythms and the development of lung diseases.

Blood Health

Researchers designed a new compound that prevented blood clots in mice, did not increase bleeding, and was well tolerated even in high doses. This finding may lead to significant changes in how doctors care for patients at risk for thrombosis, without raising the risk of bleeding.

NHLBI's Recipient Epidemiology and Donor Evaluation Study (REDS) program aims to evaluate and improve the safety and availability of the blood supply, as well as the safety and effectiveness of transfusion therapies across the lifespan, with a new focus on understudied populations, including newborns, children, and pregnant women.

NHLBI's Community Engagement Efforts

- The NIH Community Engagement Alliance (CEAL), developed during the COVID-19 pandemic, reaches out to communities across the country as a comprehensive research platform to address health disparities. We work specifically with rural, tribal, and other under-resourced communities with high rates of HLBS conditions to study the reasons for these disparities and develop health interventions specifically for those communities or regions.
- The nuMoM2b Heart Health Study, funded by NHLBI with co-funding from the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, is studying the effects of pregnancy complications on future cardiovascular health, including social factors that correlate with the future heart health of new parents, especially in communities of color.
- We are a primary funder of NIH's Climate Change and Health Initiative, an urgent, cross-cutting NIH effort to reduce health threats from climate change across the lifespan and build health resilience in individuals, communities, and nations around the world, especially among those at highest risk.

