

MEDICAL BREAKTHROUGHS **RESEARCH SUMMARY**

TOPIC: CD14: DIAGNOSING EARLY RISK OF DEMENTIA
REPORT: MB #4755

BACKGROUND: Dementia is an umbrella term, like heart disease, that covers a wide array of medical conditions, including Alzheimer's. Disorders labeled under the term "dementia" are caused by abnormal brain changes which trigger a decline in thinking skills, also known as cognitive abilities, severe enough to impair daily life and independent function. These changes also affect behavior, feelings and relationships. Alzheimer's disease accounts for 60-80% of cases. The second most common cause of dementia is vascular dementia, which occurs because of microscopic bleeding and blood vessel blockage in the brain. However, there are many other conditions that can cause symptoms of dementia, including some that are reversible, such as thyroid problems and vitamin deficiencies.

(Source: <https://www.alz.org/alzheimers-dementia/what-is-dementia>)

CURRENT STUDY FINDS PROMISE: A study of more than 4,700 participants from two large community-based heart studies was conducted and found an inflammatory marker called sCD14 is related to brain atrophy, cognitive decline and dementia. "The most exciting part is that we could assess this risk in advance, when there is ample time to intervene and change the course of a person's life," said study senior author Sudha Seshadri, MD, professor of neurology at UT Health San Antonio and director of the university's Glenn Biggs Institute for Alzheimer's and Neurodegenerative Diseases. Upon study enrollment, plasma sCD14 was measured in participants' blood. In the Framingham group, brain MRI and cognitive testing were performed within one year after the blood draw for sCD14, and a second round of tests was performed after seven years. In the Cardiovascular Health Study, the first brain MRI was obtained three to four years after enrollment and a second round five years later. There are not yet any drug trials to see if lowering sCD14 levels would help cognition in humans. However, treatment with several targeted anti-inflammatory medications, like statins, can lower sCD14.

(Source: https://www.eurekalert.org/pub_releases/2019-12/uoth-impl120619.php)

THE HEART AND HEAD CONNECTION: Brain health is said to be closely linked to heart and blood vessel health. Developing Alzheimer's appears to increase as a result of many conditions that damage the heart or arteries, such as high blood pressure, heart disease, stroke, diabetes and high cholesterol. Several studies are exploring how best to build on this heart and head connection. Researchers are investigating whether drugs like blood pressure medications now used to treat vascular disease may help people with Alzheimer's or reduce the risk of developing the disease. Additional projects are looking closely at how the connection between heart disease and Alzheimer's works at the molecular level to find new drug targets. And, lifestyle choices with known heart benefits, such as exercising and eating a heart-healthy diet, is being researched to see if it may help prevent Alzheimer's disease or delay its onset.

(Source: <https://www.mayoclinic.org/diseases-conditions/alzheimers-disease/in-depth/alzheimers-treatments/art-20047780>)

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com