



# REPRIEVE



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## Proteomic Signature of Subclinical Coronary Artery Disease in People with HIV: Analysis of the REPRIEVE Mechanistic Substudy

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Link to full article: <https://academic.oup.com/jid/advance-article-abstract/doi/10.1093/infdis/jiac196/6583088?redirectedFrom=fulltext&login=true>

Heart disease risk is increased among people with HIV (PWH), however, factors related to this increased risk are not yet fully understood. To better understand this risk, we looked at relationships between proteins and plaque (fatty build-up in and around the heart) among participants enrolled in the REPRIEVE trial. Plaque can clog or damage blood vessels (which carry blood to and from the heart) and can lead to heart disease. Proteins play many critical roles in the body, for example, transporting and storing nutrients, providing structure to cells, and aiding in food digestion. Because of this, proteins may play a critical role in the development or prevention of heart disease.

- The participants:
  - 662 participants
  - Average age: 51 years old
  - 83% male
- Relationships between proteins and plaque
  - 23 proteins were related to the type and/or presence of plaque
    - These proteins are associated with inflammation (a reaction to injury or infection) and the immune system (protects the body from infection)
  - NRP1, a protein involved in the formation of new blood vessels, was related most strongly to the type/presence of plaque
- Associations with immune function
  - Certain proteins were related to nadir and baseline CD4 counts, suggesting that function of the immune system may be related to protein function and to the development of heart disease

**In Summary:** The goal of this analysis was to look at patterns of proteins in relation to the type and/or presence of plaque among PWH. An important takeaway is that these data support the idea that inflammation and activation of the immune system seem to contribute to heart disease beyond traditional risk factors. Future work is needed to understand if protein levels can identify PWH at greater risk for heart disease, which is important for prevention in this population.

REPRIEVE Trial Website: [reprivetrial.org](http://reprivetrial.org)

*The findings shared in this summary are from the REPRIEVE population at a specific point in time. These findings are descriptive and not intended to change clinical care. If you have questions about what you've read, please talk to members of the REPRIEVE study team at your local site or a health care provider*