The Relationship Between Depression & Inflammation in People Living with HIV

Recent research findings from the Temple/Drexel Comprehensive NeuroHIV Center (CNHC)

What did they study?

- Our mood is shaped by chemicals that help brain cells communicate and keep us feeling balanced.
- The immune system also plays a role in this process. Certain immune cells, including macrophages, send signals that can influence brain function and mood.

How did they study it?

- People living with HIV, with and without depression, participated.

- Participants had their blood drawn, and researchers looked at immune cells from the blood.
- Researchers looked at how these cells turn on inflammation and send inflammation signals to the rest of the body.

What did they find?

- Macrophages from the individuals with depression tended to show higher levels of inflammation.
- This could be due to depression itself or the medications people take.
- This may affect how the immune system communicates with the brain.

What does it mean?

- Changes in inflammation may help explain why depression is common in people living with HIV, even when HIV is undetectable.
- Understanding inflammation may help us better understand the intersection of HIV, depression, and medications, and how to improve care.

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Montilla, J., Agarwal, Y., Kist, T., Gaskill, P. J., & Matt, S. M. (2025, August 19). Assessing macrophage inflammation and expression of neurotransmitter machinery in patients with comorbid HIV and depression [Poster presentation]. International and American Society of Neurochemistry (ISN/ASN) Meeting.