



Cure: HIV in the Brain

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HIV may lie dormant in a distinct viral reservoir in the brain and spinal cord, which could present another barrier to a cure. Antiretroviral therapy can keep HIV in check as long as treatment continues, but the virus inserts its genetic blueprints into human DNA and establishes a long-lasting reservoir in resting CD4 T cells in blood and lymph tissue. Now, a study suggests that HIV may establish multiple reservoirs. Researchers compared genetic sequences of rebounding virus in blood and cerebrospinal fluid (CSF) from 11 people soon after treatment interruption. About half experienced pleocytosis, or transient entry of white blood cells into the central nervous system. Some of them had differing viral sequences in the blood and CSF, suggesting they arose from distinct populations of latently infected cells. In contrast, resurgent virus in the blood and CSF was similar in those who did not experience pleocytosis. These findings suggest that HIV cure strategies may need to reach latent virus in the brain as well as in T cells in the blood and lymph system.

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