

# **Mental stimulation increases circulating CD4-positive T lymphocytes: a preliminary study**

**Marian C Diamond, Jeanne Weidner, Peter Schow, Stanley Grell, Marian Everett, 2001**

## **Abstract**

To stimulate the dorsolateral frontal cortex, 12 healthy, adult, human females played contract bridge for 1.5 h between initial and final blood sample collections. Flow cytometric analyses of samples, performed in triplicate, showed a significant increase in CD4-positive T lymphocytes. The dorsolateral frontal cortical thickness is significantly and bilaterally reduced in immune-incompetent female, nude mice. Thymic transplants reverse the deficient cortical thickness and CD4-positive cell numbers.

<https://www.sciencedirect.com/science/article/abs/pii/S0926641001000593?via%3Dihub>