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1: [Ann Neurol](#). 1988 Aug;24(2):192-9. Links

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Fluctuations of CD4+ T-cell subsets in remitting-relapsing multiple sclerosis.

- [Rose LM](#),
- [Ginsberg AH](#),
- [Rothstein TL](#),
- [Ledbetter JA](#),
- [Clark EA](#).

Department of Microbiology, University of Washington, Seattle 98195.
Patients with multiple sclerosis (MS) frequently have selective depletion of the CD45R+CD4+ T-cell subset during active phases of disease. To study the relationship between changes in this subset and the onset of objective clinical exacerbations of disease, a longitudinal study was undertaken. Two CD4+ T-cell subsets and two CD8+ T-cell subsets were monitored by two-color immunofluorescence using a fluorescence-activated cell sorter. These subsets of peripheral blood lymphocytes were monitored monthly for one year in a group of 9 patients with remitting-relapsing MS and in 11 healthy age-matched control subjects. Significant changes in the ratio of two CD4+ T-cell subsets (CD45R-/CD45R+) were detected in 7 of 9 patients with MS, but not in any of the control subjects. Of those 7 persons, 4 suffered major clinical relapses substantiated by alterations in the neurological examination. The other 3 suffered minor relapses with subjective clinical abnormalities. All 7 had increased CD4+ T-cell subset ratios (%CD4+CD45R-/%CD4+CD45R+) within the month that new symptoms were reported. Most such increases resulted from a simultaneous depletion in the number of CD45R+CD4+ T cells and an increase in the number of CD45R-CD4+ T cells. One patient suffered a major relapse with no change in the ratio of CD4+ subsets but had a depletion of all CD4+ T cells. There were no consistent changes in any of the other subsets measured. These results indicate that a subgroup of patients with MS have abnormal fluctuations of two CD4+ T-cell subsets, which may correlate with increased disease activity.
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