

# Reference range of naïve T and T memory lymphocyte subsets in peripheral blood of healthy adult

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## Abstract

**Abstract:** Background: Naïve T and T memory cell subsets can provide important information for the diagnosis and treatment of immunological and hematological disorders. Lymphocyte compartment undergo dramatic changes during adulthood; age-related reference values derived from healthy individuals are crucial. However, extensively detailed immunophenotyping reference values of peripheral blood lymphocytes in whole spectrum of adulthood performed by flow cytometry-based single-platform method are rare. Methods: 309 healthy adult volunteers were recruited from Tianjin in China. The absolute counts and percentages of CD3+CD4+ T cells, CD3+CD8+ T cells, naïve T cells (Tn), T memory stem cells (Tscm), central memory T cells (Tcm), effector memory T cells (Tem), terminal effector T cells (Tte) were determined by flow cytometry with single platform technologies. Results: Reference range of absolute counts and percentage of lymphocyte subsets were formulated by different age and gender. We also find out the changing regularity of them: the cells which have stem cell properties, Tn and Tscm cells, decrease with aging; memory cell subsets, Tcm and Tem increase with aging, which increase from 18 to 64 years old and present no significant change over the 65 years old. Gender have influence on the fluctuation of lymphocyte subsets, absolute count of CD3+CD8+, CD8+ Tcm, CD8+ Tem in male are higher than that in female. Conclusion: The reference values of percentages and absolute numbers of naïve T and T memory cell subsets can help doctors to understand the immune state of patients and to evaluate conditions of prognosis then adjust treatment for patients.

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