

How autoreactive T cells slip through the cracks

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Immune cells capable of attacking healthy organs "see" their targets differently than do protective immune cells that attack viruses, according to work published online this week in the *Journal of Experimental Medicine*.

During development, [T lymphocytes](#) are screened for their ability to recognize normal tissue. Such autoreactive cells are typically purged, but some slip by these safeguards and may contribute to autoimmune disease.

Kai Wucherpfennig at the Dana-Farber Cancer Institute and Harvard Medical School found that autoreactive T cells from patients with multiple sclerosis and type 1 diabetes bound their targets more weakly than did helpful T cells that detect influenza. Upon encounter with virus, flu-reactive T cells stopped moving and reoriented their recognition machinery toward the [target cell](#). Autoreactive T cells, by contrast, seemed distracted and moved past their intended targets.

These results suggest that some autoaggressive T cells may slip through developmental safety screens simply by failing to notice their targets.

More information: Schubert, D.A., et al. 2012. *J. Exp. Med.*
[doi:10.1084/jem.20111485](https://doi.org/10.1084/jem.20111485)

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