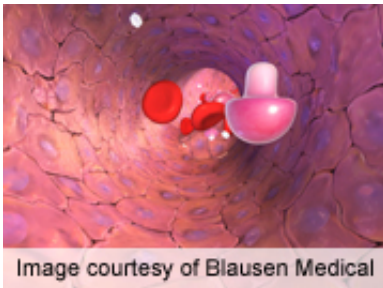


# Experimental combo treatment worsens type 1 diabetes

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A treatment regimen that is effective in preventing diabetes in a mouse model of the disease leads to worsening disease in patients with type 1 diabetes, according to a study published online June 20 in *Diabetes*.

(HealthDay)—A treatment regimen that is effective in preventing diabetes in a mouse model of the disease leads to worsening disease in patients with type 1 diabetes, according to a study published online June 20 in *Diabetes*.

Following up on previous results in a mouse model of autoimmune diabetes showing that treatment with [rapamycin](#) and interleukin-2 (IL-2) prevented the disease, S. Alice Long, Ph.D., from the Benaroya Research Institute in Seattle, and colleagues performed a phase I trial of oral rapamycin (daily for three months) and subcutaneous IL-2 (three times per week for one month) in nine patients with type 1 diabetes.

The researchers observed a transient worsening of diabetes (based on metabolic and clinical data) and  $\beta$ -cell function (based on C-peptide levels) in all subjects. There was a transient increase in the levels of regulatory T cells, but also an increase in [natural killer cells](#) and eosinophils. The frequencies of effector T-cell subsets were not affected.

"Thus, rapamycin/IL-2 therapy boosted [regulatory T cells](#), but also promoted a proinflammatory environment that may have resulted in transient  $\beta$ -cell dysfunction," Long and colleagues conclude. "Such results highlight the difficulties in translating therapies to the clinic and emphasize the importance of broadly interrogating the immune system to evaluate the effects of therapy."

Glucometers and test strips were donated by LifeScan. One author disclosed financial interests in Novartis.

**More information:** [Abstract](#)  
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