

L. reuteri enrichment of gut microbiota ups insulin secretion

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(HealthDay)—Enrichment of gut microbiota with *Lactobacillus reuteri* is associated with increased insulin secretion, according to a study published in the October issue of *Diabetes Care*.

Marie-Christine Simon, Ph.D., from the Heinrich-Heine University in Dusseldorf, Germany, and colleagues conducted a prospective study involving 21 glucose-tolerant humans (11 lean and 10 obese). Over four weeks, participants ingested 10^{10} *L. reuteri* SD5865 or placebo. Incretin effect and glucagon-like peptides (GLP)-1 and -2 secretion were assessed using oral glucose tolerance and isoglycemic glucose infusion tests. The authors also assessed muscle and hepatic lipid contents, as well as immune status, cytokines, and endotoxin.

The researchers found that daily administration of *L. reuteri* SD5865

increased glucose-stimulated GLP-1 release by 76 percent and GLP-2 release by 43 percent (both insulin and C-peptide secretion were 49 and 55 percent higher, respectively (both P < 0.05). "This suggests that oral ingestion of one specific strain may serve as a novel therapeutic approach to improve glucose-dependent insulin release," the authors write.

One author disclosed financial ties to Lilly Deutschland. Nutraceutix provided *L. reuteri* caplets and placebos for the study.

More information: [Abstract](#)
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