**A 12-week randomized clinical trial investigating the potential for sucralose to affect glucose homeostasis**V. Lee Grotz

This study investigates the effect sucralose might have on blood glucose tolerance.

**Amendments**
Sample size was powered for 90% to detect a 50% difference.
Power analysis at 80% power instead of 90% power indicates sensitivity to detect a 20% difference (still not enough, through). But, then, if we need that much power to detect a difference, is there really a real world difference? Probably not.

**Study Design**

47 participants were recruited and finished the study (all healthy men, normal weight, and in their late twenties). They were then split into two groups - sucralose (24 participants) and placebo (non-sucralose, 23 participants).

Researchers took baseline measures of health, then were given 333mg of sucralose or placebo (cellulose) to consume each day for 12 weeks (mean intake was 13.2mg/kg/day). Compliance was measured by urine analysis, pill count, and electronic tracking. They had their health markers checked every week. The participants did not consume added sucralose. Participants had blood and other health measures taken after fasting at least 10 hours.

**Discussion**
Studies have shown increased intestinal absorption of glucose when consuming sucralose due to activation of intestinal sweet taste receptors. Some in vitro studies show increased release of GLP-1 and GIP (incretin hormones) which lead to insulin secretion.

The table of multiple studies reviewed indicates the studies showing an effect of sucralose in measures of insulin and blood sugar control - all but one find sucralose to have no negative effect. Some studies show a statistically significant increase in insulin, but these changes are small and not expected to be clinically/real world meaningful.

Some studies show that some people experience an increase in blood sugar while other people experience a reduction (this study was using saccharin, however), but it might be that some people are responders and others are non-responders.

**Funding/Conflicts of Interest**
This study has conflicts of interest: All of the researchers were employees (either directly or through consulting) of nutrition companies. [INDUSTRY FUNDING]