STUDY SYNTHESIS

Disgestive Tolerance

fiberSMART®
SOLUBLE TAPIOCA & CORN FIBER

Human Digestive Tolerance of Resistant Dextrins

Resistant Dextrin at a dose of 50 – 60 grams per day is well tolerated in humans, irrespective of source. Long-term studies show no adverse effects on safety parameters including body weight changes, clinical biochemistry, hematology, and urinalysis. Efficacy studies showed that resistant dextrin at daily doses up to 50 grams did not adversely impact the measured outcomes.

Summary of Human Clinical Studies

Teo, Fairchild (2021) assessed the gastrointestinal (GI) tolerability of FiberSMART®, a resistant starch, in 40 healthy adults. Participants consumed escalating doses (10g, 30g, 50g/day) or a placebo over three 7-day phases, separated by 21-day washouts. Results showed no significant GI symptom increase across doses (p=0.376), with mild symptoms overall. Stool consistency slightly increased in the intervention group, but frequency remained similar to controls. No adverse events were reported. FiberSMART® demonstrated good GI tolerability, supporting its potential to boost dietary fiber intake without significant discomfort.

Marteau et al. (2011) assessed the digestive tolerance of a high dose of resistant dextrin consumed over the day, and its effect on digestive symptoms. In a randomized, double-blind, cross-over trial, 12 healthy men ingested 1 L/day orange juice containing 50 grams either resistant dextrin or a placebo in three equal doses at breakfast, lunch, and a late afternoon meal. Bloating, borborygmus, flatulence, nausea feelings, stomach ache, transit and stool consistency were evaluated at different times after the first consumption. Questionnaires on well-being and bowel movement were completed at 24 and 48 h. There was no statistical separation between the resistant dextrin and placebo on each criterion. Resistant dextrin is well tolerated during a single day at 50 g divided into three doses.

Jenkins et. al. (2016) GI Labs analyzed the glucose response of FiberSMART leading investigators to note that "All test meals were well tolerated and no adverse events were reported" when subjects were given 20 grams of FiberSMART® resistant dextrin.

Satouchi et al. (1993) effects of large intakes (a single dose of 10-60 g) of resistant dextrin on gastrointestinal responses and fecal parameters in 74 healthy humans (also cited in Hashizume and Okuma, 2009). Feeding these varied amounts of resistant dextrin to these subjects did not result in any clinical observed or problematic gastrointestinal symptoms.

Nomura et al. (1992) reported no adverse reactions such as diarrhea or gastrointestinal discomfort during the 12-week administration of resistant dextrin at a daily dose of 60 g in NIDDM patients with hyperlipidemia. Baer et al (2014) also reported that consumption of RD (corn) at a daily dose of 50 g for 3 weeks did not result in any adverse effects.

Baer et al. (2014); Nomura et. al. (1992) tested the efficacy and safety of resistant dextrins and reported that daily intake of up to 50 – 60 grams resistant starch for up to 12 weeks did not result in any adverse effects on the measured outcomes.

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