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Subchronic oral toxicity of a standardized white kidney bean (Phaseolus vulgaris) extract in rats.

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Abstract

Dietary supplements containing "starch blockers" are believed to reduce carbohydrate-derived calories by interfering with alpha-amylase, the digestive enzyme responsible for conversion of complex carbohydrates to simple, absorbable sugars. The present paper reports the findings of a 28-day oral toxicity study in rats of Phase 2, a standardized extract derived from the common white kidney bean (Phaseolus vulgaris), which has been shown to have alpha-amylase-inhibiting activity. In order to establish safety, eighty male and female Sprague-Dawley rats (10 animals/sex/group) received Phase 2 via oral gavage at doses of 0, 625, 1250, and 2500 mg/kg (7 days/wk) for a period of 31 (males) or 32 (females) days. There were no mortalities, clinical signs, body weight or nutritional effects, gross alterations, clinical or histopathological alterations that were considered attributable to test substance administration. Under conditions of this study and based on toxicological endpoints evaluated, the no-observed-adverse-effect level (NOAEL) of Phase 2 was judged to be 2500 mg/kg/day in each sex for administration by oral gavage of a standardized white kidney bean extract, Phase 2 for 28 days.

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Publication Types, MeSH Terms, Substances

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