

عنوان مقاله:

Effect of Germinated Black Rice Krisna Extract on Fasting Blood Glucose and Body Weight in Diabetes Mellitus Rats

محل انتشار:

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خلاصه مقاله:

Background: Diabetes mellitus (DM) is a non-communicable disease that is generally associated with fasting blood glucose (FBG) level of >126 mg/dL and weight loss. Germinated black rice krisna (GBRK) extract contains phytochemicals with antioxidant and anti-diabetic properties. The purpose of this study was to assess the impact of GBRK extract on FBG level and body weight (BW) in rat model of DM. Methods: In an in vivo pre- and post-test study 36 male Wistar rats with BW design, of 150-200 g were enrolled and divided into 6 groups, including control (C), negative control (NC), GBRK 535 mg/kg BW (P1), GBRK 1070 mg/kg BW (P2), and GBRK 2140 mg/kg BW (P3). Diabetes was induced using streptozotocin (STZ) and nicotinamide (NA) and the intervention period was 14 days. Measurement of FBG level was by quantitative enzymatic colorimetric test of Glucose Oxidase Phenol 4-Aminoantipyrine (GOD-PAP) and body weight was determined by a digital scale. Results: The administration of GBRK extract in P1, P2, and P3 groups could significantly reduce the FBG ($p < 0.05$). GBRK in P1, P2, and P3 groups could also significantly improve the body weight to normal state too ($p < 0.05$). Conclusion: GBRK extract at doses of 535, 1070, and 2140 mg/kg BW for 14 days was demonstrated to improve metabolic disorders in diabetes by reducing FBG level and improving the BW to the normal state.

کلمات کلیدی:

Germinated black rice, diabetes mellitus, Blood glucose, Body weight, Antioxidant

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