

Hypoglycaemic and hypolipidemic efficacy of barnyard millet (*Echinochloa frumentacea* Link) based health food

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■ **ABSTRACT** : An investigation was planned to exploit the beneficial aspects of barnyard millet by fabricating a health food and to evaluate its clinical efficacy in terms of glycaemic and lipemic response in seven normal adult volunteers. Barnyard millet constituted the main ingredient (77%) and other ingredients such as black gram *Dhal* (4.6 %), dehydrated carrot (9.2%) were added either as a source of lysine, antioxidants, dietary fibre, hypoglycaemic and hypocholesterimic constituents, apart from enhancing sensory qualities. The developed health food had high protein (12%), dietary fibre (37%) and β -carotene (36,703 μ g/100g) content. Fat and calorific contents of health food were low having 4.63 per cent and 282 Kcal/100g, respectively. The glycaemic index of health food was 59 with values ranging from 41-71 among the volunteers. The feeding intervention of 28 days revealed a reduction in body weight (2 %) besides changing blood lipids. Significant reduction in blood sugar (7%) was observed. Reduction in triglycerides (10 %), total cholesterol (8%), Low Density Lipoprotein-cholesterol (9%) and Very Low Density Lipoprotein-cholesterol (9 %) and increase in High Density Lipoprotein-cholesterol (5%) were observed in experimental group. Reduction in the ratio of TC: HDL and LDL: HDL observed was 12 and 13 per cent, respectively. Thus, the formulated barnyard millet health food possessed hypoglycaemic and hypolipemic properties.

■ **KEY WORDS** : Barnyard millet, Dietary fibre, Glycaemic index, Total cholesterol

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