

Blood Sugar, Haemoglobin and Malondialdehyde Levels in Diabetic White Rats Fed a Diet of Corn Flour Cookies

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| First Author | |
| Last Author | |
| Authors | Aini, N; Sustriawan, B; Wahyuningsih, N; Mela, E; |
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| Abstract | <p>The purpose of the study was to analyse the chemical composition of corn cookies containing different types of sugar and fat, and determine their effect on physiological parameters in diabetic rats. The experimental animals were studied using a randomised block design with seven groups of rats. The test groups were as follows: group 1, negative control rats (normal) fed standard; group 2, positive control rats (diabetic) fed standard; group 3, diabetic rats fed wheat cookies; group 4, diabetic rats fed C1 corn cookies; group 5, diabetic rats fed C2 corn cookies; group 6, diabetic rats fed C3 corn cookies; and group 7, diabetic rats fed C4 corn cookies. The tests on the rats revealed that the cookies had significant effects on blood sugar, malondialdehyde (MDA) and haemoglobin levels as well as body weight parameters. Corn cookies containing crystalline coconut sugar and virgin coconut oil (VCO) were effective at lowering blood sugar and MDA levels while increasing haemoglobin and body weight in diabetic rats. Significantly, after four weeks on this diet, rats with diabetes mellitus were in the same overall condition as normal rats. These findings suggest that these cookies may be gluten-free functional foods suitable for diabetics. These findings suggest that diabetics can safely consume maize cookies.</p> |
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| Author | Doctor of Philosophy NUR AINI, S.TP, M.P. |