

The Effect of Cocoa Powder On Post Prandial Blood Glucose Levels In Sprague Dawley Rats Diabetes Mellitus Type 2

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ABSTRACT

Diabetes Mellitus (DM) is one of the kind of a degenerative disease known as a glucose disease or urinary sweet. The provision of functional foods containing antioxidants, flavonoids that can help lower blood sugar levels. Any of various food studied having an effect to lower the levels of sugar blood is cocoa (*Theobroma cacao L.*). The purpose of this research was to know the effect of giving cocoa powder (*Theobroma cacao L*) toward sugar levels of blood postprandial in the rat of *sprague dawley* diabetes mellitus type 2. The kind of research used for this study was experimental research. The selection of 15 white rats (*Rattus orvegicus*) *Spargue Dawley* , with weight of 200-300gr , age 2-3 months. Rat divided into the 5 groups (K+), (K-), (P1), (P2), (P3). The Rat were fed with High Fat Diet (HFD) for 5 weeks and induced with *streptozotocin* with low doses (30 mg/kgBB) intraperitoneally. Intervention of cocoa powder by using doses that was dose 1 the rat was given cocoa powder with 3 doses levels which were 0.4 grams, 0.8 grams ,and 1.2 grams. Cocoa powder was given every day after the induction of streptozotocin for 2 weeks. The Data analysis used spss 16 application showed no significant differences between *post prandial* blood glucose levels before and after treatment. The Percentage calculation results of *post prandial* blood glucose levels change which had the most optimal treatment existed in group 3 (P3). Doses used was 1,2 gr / day with percentage of change as much as 33,5 %. cocoa powder giving did not influence significantly in lowering *post prandial* blood glucose levels in rat diabetes mellitus type 2.

Keywords: cocoa powder, diabetes mellitus type 2, *post prandial* blood glucose levels