

ANTI-METABOLIC SYNDROME EFFECT OF ALLULOSE SUPPLEMENTATION IN C57BL/KSJ-DB/DB MICE

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The present study investigated the effect of allulose on metabolic effect in obese diabetic mice. The C57BL/KsJ-db/db mice (four-week-old, male, n=48) were fed a normal chow diet for acclimation period for 1 week after arrival. At 5 weeks of age, all mice were randomly divided into 4 groups of 12 mice per each group and then fed a normal diet(ND), ND + 5% arabinose(AR), ND + 5% erythritol(ER) and ND + 5% allulose(AL) for 12 weeks. Body weight was significantly decreased in the AR group compared to the ND group. The weights of total white adipose tissue (WAT) were markedly decreased in the AR and AL groups compared to the ND group. The level of plasma triglyceride(TG) was significantly decreased in the AL group than in the ND group. Also, the AL group had higher apolipoprotein A/ apolipoprotein B ratio compared to that in the ND group. Fasting blood and plasma glucose levels were significantly decreased in the AL group compared to the ND group. The AR group also significantly decreased plasma glucose concentration compared with the ND group. These results propose that AR and AL have beneficial effects on anti-obesity and anti-diabetes through preventing adiposity, hyperlipidemia and hyperglycemia.

Biography

Da youn Lee has been graduated from Kyungpook national university of Daegu, Republic Korea. She has been majored in Food Science and Nutrition. Later on she has entered the Kyungpook national university graduate school. Presently she is studying at the Kyungpook national university.

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