

## Improvement of Glucose Metabolism by Dongchunghacho Rice Supplementation in Streptozotocin Induced Diabetic Rats

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Dongchunghachorice, produced by cultivating Dongchunghacho fungus on rice, could be an effective functional food because it offers added value to rice and thus increases rice consumption. We investigate the effect of Dongchunghacho rice (polished rice cultivated with *Paecilomyces tenuipes* (PT) or *Cordyceps militaris* (CM) on blood glucose and insulin level in streptozotocin (STZ)-diabetic rats. Diabetes was induced by intraperitoneal injection of STZ (50mg/kg) once a week for two weeks to 9 wk-old male Sprague-Dawley rats. The animals were then divided into 4 groups; normal-control fed control diet (NC, 65% rice as carbohydrate source), 3 diabetic groups fed either normal diet (DC), 2 sorts of Dongchunghacho rices (PT and CM, 20% Dongchunghacho rice of 65% rice) for 4 weeks. Supplementation with Dongchunghacho rices in diabetic rats caused decreases in insulin levels and fasting glucose levels. Results of the oral glucose tolerance test (OGTT) also showed a significant decrease AUC value in Dongchunghacho rice supplemented groups compared to DC group. These results suggest that the Dongchunghacho rice has hypoglycemic properties in STZ-induced diabetic rats. This work was supported by a grant (R05-2002-000-00999-0) from the Korean Science and Engineering Foundation.