

The mushroom *Agaricus Blazei* Murill in combination with metformin and gliclazide improves insulin resistance in type 2 diabetes: a randomized, double-blinded, and placebo-controlled clinical trial.

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Source

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Abstract

BACKGROUND:

Complementary and alternative medicine use in adults with type 2 diabetes is popular. Although most of the herbs and supplements appear to be safe, there is still insufficient evidence that demonstrates their definitive beneficial effects. This study was done to determine whether the supplement of *Agaricus blazei* Murill extract improves insulin resistance in type 2 diabetes.

MATERIALS AND METHODS:

This study was a clinical randomized, double-blind, placebo-controlled trial. Of a population of 536 registered diabetes patients with 72 subjects (1) aged between 20 and 75 years, (2) being Chinese, (3) having type 2 diabetes for more than 1 year, and (4) having been taking gliclazide and metformin for more than 6 months were enrolled in this study. The enrolled patients were randomly assigned to either receiving supplement of **Agaricus blazei Murill (ABM) extract** or placebo (cellulose) 1500 mg daily for 12 weeks. Homeostasis model assessment for insulin resistance (HOMA-IR) was used as the major outcome measurement.

RESULTS:

At the end of the study, subjects who received supplement of ABM extract (n = 29) showed significantly lower HOMA-IR index (3.6[standard deviation, 2.5] versus 6.6[standard deviation, 7.4], p = 0.04) than the control group (n = 31). The plasma adiponectin concentration increased 20.0(standard deviation, 40.7)% in the ABM group after 12 weeks of treatment, but decreased 12.0(20.0)% among those taking the placebo (p < 0.001).

CONCLUSIONS:

Supplement of ABM extract improves insulin resistance among subjects with type 2 diabetes. The increase in adiponectin concentration after taking AMB extract for 12 weeks might be the mechanism that brings the beneficial effect. Studies with longer periods of follow-up should be conducted in the future.