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## Regulation effect of tempe (tempeh) in serum glucose in type II diabetic rats

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In recent years, tempe (tempeh) is being more attention than before. Tempe (tempeh) originates from traditional food of Indonesia, is produced by fermentation of soybean. Traditional tempeh only uses *Rhizopus* to ferment, trying *Lactobacillus* co-culture with *Rhizopus* to create more comfortable condition for fermentation. Diabetes is an increasingly serious disease of modern civilization. A healthy body secretes insulin to regulate blood glucose by pancreas. Through the action of insulin so that glucose in the blood transport into cells to provide energy which cells need. When the level of insulin is not enough or inefficient use of insulin to reduce blood sugar in body, the problem of high blood sugar will occur. The most common diabetes is type II, which is acquired diabetes. It is confirmed that aglycone can help regulation of blood sugar. Tempe has more aglycone than other soybeans product. This study observes changes of blood sugar in diabetic rats by fed tempe. To induce diabetes uses pharmacy with high-fat diet. Using streptozotocin (STZ) with nicotinamide induces rats to get diabetes and make sure their blood sugar above 150 (mg/dl). At same time, rats had fed high fat diet which includes cholesterol, coconut oil and normal diet. Comparing tempe, tempe with *Lactobacillus* are useful with negative control and soybeans groups. Obviously, diabetic rats' regulation of blood sugar with tempe are very useful.

### Biography

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