

## Corn silk (*Zea mays* L.) as a Traditional Herb in Diabetes Mellitus

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Diabetes is currently considered as one of the toughest growing worldwide epidemic and effective new therapeutic strategies and drugs against this disease are urgently needed. Type 2 diabetes mellitus (T2DM) accounts for more than 90%. There are numbers of therapies used in clinical for T2DM, such as insulin and oral anti-diabetic chemical agents. However, many of them have some limitations and side effects [1].

Corn silk was a well-known traditional Chinese herbal medicine and functional food. Many studies have shown that corn silk possesses a good hypoglycemic effect and no toxic and side effects. Hypoglycemic effects of corn silk have been illustrated in the following ways:

1. Corn silk inhibits  $\alpha$ -amylase and can slow down starch digestion rate of food and restrain the increase of post-meal blood sugar [2]; and it also can inhibit  $\alpha$ -glucosidase activity to regulate glucose metabolism.
2. Corn silk exerts hypoglycemic effect by targeting signal pathways to enhance insulin action and improve glucose metabolism.
3. Corn silk polysaccharides can reduce the body weight loss, decrease blood glucose and serum insulin levels, and improve glucose intolerance in T2DM mice [3].

In conclusion, corn silk has advantages in good activities and nontoxicity. It has the potential to be a natural and functional food or medicine for T2DM treatment.

### Bibliography

1. Zhao W, *et al.* "Comparison of anti-diabetic effects of polysaccharides from corn silk on normal and hyperglycemia rats". *International Journal of Biological Macromolecules* 50.4 (2012): 1133-1137.
2. Chen S, *et al.* "Chemical modification, antioxidant and alpha-amylase inhibitory activities of corn silk polysaccharides". *Carbohydrate Polymers* 98.1 (2013): 428-437.
3. Pan Y, *et al.* "Physicochemical properties and antidiabetic effects of a polysaccharide from corn silk in high-fat diet and streptozotocin-induced diabetic mice". *Carbohydrate Polymers* 164 (2017): 370-378.

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