

The potential of corn silk (*Zea mays* L.) in glycemic control and its indirect relevance to diabetic wound healing: A scoping review

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ABSTRACT

*Diabetes mellitus is characterized by chronic hyperglycemia, oxidative stress, and persistent inflammation, leading to delayed wound repair. Corn silk (*Zea mays* L.), a common traditional remedy, exhibits antihyperglycemic, antioxidant, and anti-inflammatory properties, suggesting biological relevance to diabetic tissue homeostasis. This scoping review mapped evidence on corn silk's effects on glycemic control and its indirect relevance to diabetic wound healing. Searches of PubMed/MEDLINE, Scopus, Web of Science, and Google Scholar (2018–2025) yielded nine eligible studies, mainly in vitro and diabetic animal models, with few short-term human trials. Corn silk consistently reduced fasting blood glucose and improved insulin sensitivity, supported by flavonoids, phenolics, polysaccharides, and saponins. Reported mechanisms antioxidant enzyme modulation, inhibition of carbohydrate digesting enzymes, and improved lipid-oxidative profiles address key biological barriers to wound repair, though no study measured wound-specific outcomes. Corn silk shows promise as a complementary approach for glycemic regulation, but targeted wound models and larger controlled clinical trials are needed to confirm its translational applicability in diabetic tissue repair.*

Keywords: Corn silk, *Diabetes mellitus*, diabetic wound healing, glycemic control, *Zea mays*