

# Supplements to help manage Blood Sugar Health

## Other Fibers

**COMMON NAME:** Wheat dextrin, inulin, calcium polycarbophil, methylcellulose, soluble corn fiber

### NOT RECOMMENDED - EVIDENCE

#### LEVELS OF EVIDENCE



**Recommended:**

Several well-designed studies in humans have shown positive benefit. Our team is confident about its therapeutic potential.



**Recommended with Caution:**

Preliminary studies suggest some benefit. Future trials are needed before we can make a stronger recommendation.



**Not Recommended - Evidence:**

Our team does not recommend this product because clinical trials to date suggest little or no benefit.



**Not Recommended – High Risk:**

Our team recommends against using this product because clinical trials to date suggest substantial risk greater than the benefit.

#### Evaluated Benefits

No evidence of efficacy or not indicated

## Source

- Wheat dextrin: Wheat dextrin/semisynthetic/chemically altered wheat starch (the FDA considers methylcellulose semisynthetic because it has been changed from an insoluble fiber (cellulose) to a soluble fiber (methylcellulose). Wheat dextrin has been changed from a non-fiber (starch) to a soluble fiber, and therefore is even more of a semisynthetic nature. Since the dextrinization process for wheat dextrin is incomplete, a significant percentage remains starch, which is readily converted in the small bowel to sugar.
- Inulin: Extracted from onions and by-products of sugar production from beets or chicory root.
- Calcium polycarbophil: a synthetic polymer of polyacrylic acid cross-linked with divinyl glycol, with calcium as a counterion.
- Methylcellulose: Chemically altered wood pulp (cellulose), designated as a semisynthetic fiber by the FDA.
- Soluble corn fiber: Enzymatic hydrolysis of cornstarch.

## Indications/Population

Noneffective.

## Mechanism of Action

- Soluble, viscous, gel-forming fibers trap some carbohydrates and sugars, shielding them from digestion and absorption, slowing/prolonging sugar absorption. Improvement in glycemic control with consumption of soluble fiber has been shown to be highly correlated with the viscosity of a gelling fiber. Only viscous, gel-forming fibers have been shown to effectively lower peak postprandial blood glucose, fasting blood glucose, and HbA1c, so non-viscous fibers would not be expected to exhibit this health benefit.
- Methylcellulose is viscous but not gel-forming, so it would not be expected to lower blood sugar, which is a gel-dependent phenomenon.
- Polycarbophil is a gel-forming synthetic polymer, but the marketed version is a calcium salt to prevent gelling (choking hazard). Preclinical and clinical data support that the calcium does not dissociate, leaving the polycarbophil inert/non-gelling.
- Wheat dextrin is soluble and nonviscous.
- Inulin is soluble and nonviscous.
- Calcium polycarbophil is soluble and viscous but does not dissipate well, according to literature.
- Methylcellulose is soluble and viscous.
- Soluble corn fiber is soluble and nonviscous.

## Side Effects

Wheat dextrin is constipating.

## Dosing

Per each manufacturer's recommendation

## Drug Interactions/Cautions

May interfere with medication absorption.

Choking hazard with some of the gelling brands in this category. Thus these have no benefit for lowering blood sugar and only risk.

## References

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