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Data on whether bitter melon can reduce lower blood sugar levels are limited.

Bitter melon is a perennial plant found in Asia, South America, East Africa, and the Caribbean. The edible fruit is used both as food and in medicine to treat diabetes, cancer, viral infections, and immune disorders.

Several active substances in bitter melon may act in a way similar to insulin. However, high-quality studies are needed to determine safety and effectiveness, and it cannot be recommended as a replacement therapy for insulin or hypoglycemic drugs.

Human studies on its effects on cancer are also lacking. One study showed it had no effect on the immune system of cervical cancer patients.

## What are the potential uses and benefits?

- To prevent cancer  
Lab studies suggest that bitter melon extracts may kill certain cancer cells, but this has not been studied in cancer patients.
- To treat diabetes  
Limited data suggest bitter melon may help lower blood sugar, but a meta-analysis concluded the evidence is low quality with little safety data. Larger high-quality studies are needed.
- To reduce fever  
There is no evidence to support this claim.
- To treat infections  
Lab studies suggest bitter melon extracts can kill certain viruses, but human data are lacking.

## What are the side effects?

Gastrointestinal symptoms

Case Reports

- Irregular rapid heartbeat: In a 22-year-old man who ingested bitter melon juice for a few days before being admitted for complaints of indigestion. Treatment with medications was needed.
- Gastric ulcer: In a 40-year-old man who ingested a half-liter of homemade bitter melon extract. IV fluids, GI medications, and blood transfusion were needed.
- Severe kidney injury: In a 60-year-old man with diabetes and high blood pressure who ingested an [Ayurvedic](#) formulation containing bitter melon, and in a 60-year-old woman who ingested a bitter melon extract.
- Toxicity: Ingestion of vicine from the seed may cause headache, fever, abdominal pain, and coma.

## What else do I need to know?

Do Not Take if:

- You are pregnant: Animal studies suggest bitter melon may cause birth defects.
- You are taking insulin: Bitter melon may have additive effects.
- You are taking diabetes medications: Bitter melon may have additive effects.
- You are taking P-gp substrate drugs: Bitter melon may increase the concentration and toxicity of these drugs. Clinical significance is not known.
- You are taking CYP450 substrate drugs: Bitter melon extract inhibits CYP2C9 and may affect the metabolism of these drugs. Clinical significance has yet to be determined.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.

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