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Although goldenseal is popular for minor infections or as a tonic, human data are lacking.

Goldenseal is a North American botanical with origins as a traditional remedy among Native Americans. It has historically been used for skin and eye irritations, as a bitter tonic, and to improve digestive function. It is also marketed as an antioxidant and is often combined with [echinacea](#) in supplements to support immune function.

Two of its compounds, [berberine](#) and hydrastine, have been studied in the lab. In animal studies, goldenseal compounds appeared to kill bacteria and other microbes, and slow tumor growth. Anti-inflammatory, spasm-reducing, and muscle-contracting properties have also been observed. However, other animal studies suggest potential toxicity with long-term use and there are no human data to confirm supposed effects.

What are the potential uses and benefits?

- To treat infections

Although goldenseal has been traditionally used for eye and skin ailments, human data are lacking. There is also no evidence for its use against the common cold. Lab studies indicate that goldenseal compounds have antimicrobial properties, but also suggest potential sensitivity to sunlight with topical products that contain goldenseal.

- To control muscle spasms

Lab studies suggest goldenseal may relax muscle tissue, but human data are lacking.

- To treat gastrointestinal disorders

Lab studies show that a goldenseal extract causes relaxation of smooth muscle like that found in the gastrointestinal tract, but it is not known if goldenseal helps treat GI disorders.

What are the side effects?

Case reports

- **Photosensitivity:** In a patient following use of a dietary supplement containing ginseng, goldenseal, bee pollen, and other ingredients. It is suggested that the combination rather than the individual herbs contributed to this side effect.
- **High salt concentrations in the blood :** In a pre-teen with diabetic ketoacidosis (DKA) who took goldenseal for 2 weeks prior. This side effect did not occur again during a later episode of DKA when the individual was not taking goldenseal. Diuretic properties in goldenseal may have contributed.

What else do I need to know?

Patient Warnings:

- Avoid long-term use of this product due to potential toxicity issues raised in animal studies.

Do Not Take if:

- You are taking bosutinib: Models predict that goldenseal can affect systemic concentrations of this oral chemotherapy.
- You are taking metformin: Goldenseal can affect metformin absorption, and may therefore adversely affect blood sugar control.
- You are taking CYP450 substrate drugs, especially 3A4 and 2D6: Human studies suggest goldenseal may increase the risk of side effects of these drugs.
- You are pregnant or nursing: Berberine in goldenseal may cause or worsen jaundice in newborns.

Special Point:

- The berberine content in goldenseal can vary widely.
- Goldenseal is sometimes referred to as turmeric root, but should not be confused with [turmeric](#) (*Curcuma longa*).

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 to search our virtual library.

Goldenseal - Last updated on March 3, 2022

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