



[Authoritative facts](#) about the skin from the [New Zealand Dermatological Society Incorporated](#).

[Home](#) | [Treatments](#)

## Potassium iodide

Potassium iodide (KI) is prepared by reacting iodine with a hot solution of potassium hydroxide. It is mainly used in the form of a saturated solution, 100gm of potassium iodide to 100ml of water. This equates to approximately 50mg/drop. The solution is usually added to water, fruit juice or milk before drinking.

Potassium iodide has been primarily used in the treatment and prevention of simple goitre, which is endemic in areas where the diet is deficient in iodides. Goitre results from low levels of thyroid hormone. Potassium iodide is usually given for this purpose as iodised salt. Other indications include treatment of hyperthyroidism, radiation protectant of the thyroid gland, pre-operative preparation of patients with Graves' disease and the treatment of some dermatological conditions such as cutaneous lymphatic [sporotrichosis](#) and inflammatory dermatoses.

### Potassium iodide for dermatological diseases

It is not clear how potassium iodide works in the treatment of dermatological conditions but it may be because of its effect on neutrophils. Neutrophils are a type of white blood cell, important in the immune system's fight against bacteria.

Potassium iodide appears to be particularly effective in conditions where neutrophils predominate in the early stages of the disease. Its activity against fungi is possibly because it kills the fungi directly or by enhancement of the body's immunologic and non-immunologic defence mechanisms.

The effectiveness of potassium iodide in the treatment of dermatological diseases has been shown in a number of studies.

Disease	Dosage	Notes
Sporotrichosis	Adult: 500–1500mg daily, increasing to 4000–6000mg daily for 6–10 weeks. Child: one half to one third of adult dose	<ul style="list-style-type: none"> <li>• First used in early 20th century and continues to be used today because of its effectiveness and low cost</li> <li>• Large and frequent doses may cause gastrointestinal irritation. In some countries itraconazole has replaced KI use</li> </ul>
<a href="#">Erythema nodosum</a> <a href="#">Sweet disease</a> <a href="#">Behcet disease</a> Nodular vasculitis <a href="#">Erythema multiforme</a>	300–900mg daily	<ul style="list-style-type: none"> <li>• Relief of symptoms such as local tenderness, fever and arthralgias within 24–48hours</li> <li>• Clearing of lesions within 10–14 days</li> </ul>
Recalcitrant <a href="#">pyoderma gangrenosum</a>	300mg 3 times daily	<ul style="list-style-type: none"> <li>• Marked improvement after 2 months and complete clearing after 4 months</li> </ul>
<a href="#">Wegener granulomatosis</a>	800mg daily	<ul style="list-style-type: none"> <li>• In combination with prednisolone, lesions rapidly improved and cleared completely in 3 months</li> </ul>

For many diseases, newer more modern treatments are now available. However, because of its effectiveness and low cost, potassium iodide is still sometimes the drug of choice. If not, it is often used as a second line drug when other treatments are found to be ineffective.

## Precautions

---

Before using potassium iodide the following should be considered.

Medical history – inform your doctor if you have any other medical problems, especially:

- Thyroid disease
- Kidney disease
- Tuberculosis
- Hyperkalaemia (high blood levels of potassium)

Medication history – inform your doctor if you are taking any of the following medicines:

- Potassium-sparing diuretics (amiloride, spironolactone, triamterene)
- Antithyroid agents
- Lithium

Pregnancy – taking potassium during pregnancy may cause thyroid problems or goitre in the newborn infant.

Breast-feeding – potassium iodide crosses into breast milk and may cause skin rash and thyroid problems in nursing babies.

## Side Effects

---

Side effects are rare when potassium iodide is used in short courses and at low doses. The most common side effects are abdominal pain, diarrhoea, nausea or vomiting. These acute side effects often go away during treatment as your body adjusts to the medicine or can be lessened by avoiding rapid dosage increases. Other, less common side effects include [urticaria](#) and [angioedema](#), i.e. hives, swelling of arms, face, legs, lips, tongue, throat and lymph glands.

### Pustules due to potassium iodide

---



With prolonged use, patients may experience symptoms of iodism or potassium toxicity.

Symptoms of iodism include:

- Burning of mouth or throat
- Metallic taste
- Increased watering of mouth
- Sore teeth and gums
- Severe headache

Symptoms of potassium toxicity include:

- Confusion
- Irregular heartbeat
- Numbness, tingling, pain or weakness in hands or feet

#### **Related information**

---

##### **References:**

- Book: Textbook of Dermatology. Ed Rook A, Wilkinson DS, Ebling FJB, Champion RH, Burton JL. Fourth edition. Blackwell Scientific Publications.
- Sterling JB, Heymann WR. Potassium iodide in dermatology: a 19th century drug for the 21st century—uses, pharmacology, adverse effects, and contraindications. Journal of the American Academy of Dermatology 2000;43:691–7 [Medline](#)

##### **On DermNet NZ:**

- [Skin treatments](#)
- [Oral treatments](#)

##### **Other websites:**

- MedlinePlus: [Potassium iodide \(systemic\)](#) – information about medicines

##### **Books about skin diseases:**

See the [DermNet NZ bookstore](#)

**Author:** Vanessa Ngan, staff writer

DermNet does not provide an on-line consultation service.

If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

Created 2005. Last updated 26 Dec 2006. © 2008 NZDS. Disclaimer.