

Ivy leaf extract for cough

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Cough is a frequent complaint in pharmacy settings, often prompting patients to seek over-the-counter (OTC) relief. Ivy leaf extract (*Hedera helix*) has emerged as a popular natural remedy due to its mucolytic, bronchodilatory, and anti-inflammatory properties. This article reviews the pharmacological actions, clinical evidence, and practical considerations associated with ivy leaf extract in cough management. Active constituents such as saponins promote mucus clearance and ease breathing in patients with acute respiratory tract infections. Clinical studies support its efficacy and safety in both adults and children, with few reported side effects. Ivy leaf extract is widely available in syrups and effervescent tablets and is well-tolerated when used as directed. While not suitable for chronic or complex coughs, it remains a valuable non-sedating alternative for managing acute, productive coughs.

Republished from: SA Pharmacist's Assistant 2025;25(3):11-14

Introduction

Cough is a common symptom encountered in pharmacies, often prompting patients to seek effective over-the-counter (OTC) remedies. Among the natural options available, ivy leaf extract (derived from *Hedera helix*) has gained prominence in cough medicines due to its favourable efficacy and safety profile.¹ Understanding the role of ivy leaf extract in cough management, its mechanism of action, clinical evidence, and practical considerations is essential for providing informed recommendations to patients.

What is ivy leaf extract?

Ivy leaf extract is derived from the leaves of *Hedera helix*, a climbing plant native to Europe and parts of Asia. Traditionally used in herbal medicine, ivy leaf extract is now incorporated into several modern cough remedies, particularly for its expectorant and mucolytic properties. The active components, primarily saponins such as hederacoside C and α -hederin, contribute to its therapeutic effects. These compounds help alleviate cough by thinning mucus and promoting its expulsion from the respiratory tract, making it easier for patients to breathe and recover from respiratory infections.²

Ivy leaf extract is often marketed as a natural alternative to conventional cough formulations. Its widespread use in paediatric and adult formulations underscores its versatility and safety when used as directed.³

Mechanism of action

Saponins in ivy leaf extract stimulate bronchial epithelial cells, enhancing mucus production and reducing its viscosity. This mucolytic effect facilitates clearance of mucus from the airways, which is particularly beneficial in productive coughs associated with upper respiratory tract infections (URTIs).^{1,4,5}

Additionally, ivy leaf extract exhibits bronchodilatory and anti-inflammatory properties. It relaxes bronchial smooth muscles, reducing airway resistance and improving airflow. The anti-inflammatory effects help mitigate irritation in the respiratory tract, which can exacerbate coughing. These combined actions make ivy leaf extract effective for productive coughs.^{1,4,5}

Clinical evidence supporting ivy leaf extract

Clinical evidence supports the efficacy of ivy leaf extract in treating cough, particularly in cases of acute bronchitis and URTIs. A clinical trial ($n = 181$) by Schaefer et al.⁶ showed that a liquid containing ivy leaf extract (EA 575®) reduced cough frequency and severity in adults when compared with placebo, and was well tolerated. Another study by Kruttschnitt et al.⁷ compared ivy leaf syrup to acetylcysteine and found both worked equally well in easing symptoms of acute bronchitis in adults and children. A 2021 review by Sierocinski et al.⁸ also found that ivy leaf extract can moderately improve cough symptoms and is generally safe. These findings highlight why ivy leaf extract is a useful and reliable ingredient in OTC cough medicines.

Practical considerations

Dosage and administration

Ivy leaf extract is available in syrups, and effervescent tablets. Dosage recommendations vary by age and product. Patients should be advised to follow the manufacturer's instructions or consult a healthcare provider for personalised guidance.³

Patient counselling

When recommending ivy leaf extract, patients should be educated on its benefits and proper use. Key counselling points include:

- **Indication:** Ivy leaf extract is suitable for productive coughs associated with URTIs. It is not intended for chronic coughs

Product	Presentation	Dose	Warning
Hedelix 0.8 g <i>Hedera helix</i> per 100 ml	syr	0–1yr 1yr–4yrs 4yrs–10yrs 10yrs+	2.5 ml once daily 2.5 ml 3x daily 2.5 ml 4x daily 5 ml 3x daily
50 mg <i>Hedera helix</i> per tablet	eff	6yrs–11yrs 12yrs+	1/2 tab dissolved in 1/2 glass of water 2x daily after meals 1 tab dissolved in 1/2 glass of water 2x daily after meals
Flemsolve 35 mg <i>Hedera helix</i> L per 5 ml	syr	2yrs–5yrs: 6yrs–12yrs: 12yrs+:	2.5ml 2x daily (max 5 ml/day) 2.5–5ml 2–3x daily (max 10 ml/day) 5–7.5ml 1–3x daily (max 15 ml/day)
Promucoff 7 mg <i>Hedera helix</i> L per 1 ml	syr	2yrs–6yrs: 6yrs–12yrs: 12yrs+:	2.5 ml 3x daily 5 ml 3x daily 5–7.5 ml 3x daily
Prospan 7 mg <i>Hedera helix</i> L per 1 ml	syr	0–6yrs: 6yrs–12yrs: 12yrs+:	2.5 ml 3x daily 5 ml 3x daily 5–7.5 ml 3x daily
65 mg <i>Hedera helix</i> L per tablet	eff	4yrs–12yrs: 12yrs+:	1/2 tab in water 3x daily 1 tab in water 2x daily

References

Package inserts for Prospan, Flemsolve, Promucoff and Hedelix.⁹

caused by conditions like asthma or chronic obstructive pulmonary disease (COPD) unless prescribed by a physician.^{9,10}

- **Onset of action:** Patients may notice symptom improvement within 2–3 days, with optimal effects after 7–10 days of consistent use.⁶
- **Hydration:** Encourage patients to stay well-hydrated, as adequate fluid intake enhances the mucolytic effects of ivy leaf extract.^{3,11}
- **Combination with other medications:** Ivy leaf extract is generally safe to use with other OTC cough remedies, but patients should avoid combining it with cough suppressants (e.g. dextromethorphan) unless advised by a healthcare provider, as this may hinder mucus clearance.¹¹

Safety and side effects

Ivy leaf extract is well-tolerated, with a low risk of adverse effects. Mild gastrointestinal symptoms, such as nausea or diarrhoea, are the most commonly reported side effects, occurring in a small percentage of users.⁵ Allergic reactions are rare but possible, particularly in individuals with known sensitivities to plants in the Araliaceae family.^{5,11} Many ivy leaf extract products contain sorbitol, which may have a laxative effect.

Special populations

- **Paediatric use:** Ivy leaf extract is approved for children as young as two years in many formulations, making it a popular choice for paediatric cough relief. However, parents should be advised to consult a paediatrician for children under two years or those with underlying health conditions.¹⁰

- **Pregnancy and breastfeeding:** Limited data exist on the use of ivy leaf extract during pregnancy and lactation. Pregnant or breastfeeding patients should consult a healthcare provider before use.¹²

Advantages and limitations of ivy leaf extract in cough medicine

Ivy leaf extract offers several advantages that make it appealing to patients and healthcare providers. Its natural origin resonates with individuals seeking herbal remedies,⁸ and its efficacy is supported by clinical evidence.^{6,7,8}

Despite its benefits, ivy leaf extract is not a one-size-fits-all solution. It is most effective for acute coughs associated with URTIs and may not address chronic or severe coughs caused by underlying conditions. Refer patients with persistent coughs (lasting more than three weeks) or symptoms like fever, weight loss, or haemoptysis to a physician for further evaluation.¹¹ Additionally, the taste of some ivy leaf syrups may be unpalatable to children, which can affect compliance.

Conclusion

Ivy leaf extract is a valuable option in the management of acute cough, offering a herbal, evidence-based alternative approach to symptom relief. Its mucolytic, bronchodilatory, and anti-inflammatory properties make it effective for productive coughs, with a favourable safety profile for adults and children.

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