

# Pilewort

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## Species (Family)

*Ranunculus ficaria* L. (Ranunculaceae)

## Synonym(s)

*Ficaria*, *Ficaria ranunculoides* Moench., Lesser Celandine, *Ranunculus*

## Part(s) Used

Herb

## Pharmacopoeial and Other Monographs

BHP 1996<sup>(G9)</sup>  
PDR for Herbal Medicines 2nd edition<sup>(G36)</sup>

## Legal Category (Licensed Products)

GSL<sup>(G37)</sup>

## Constituents<sup>(G40,G42,G64)</sup>

**Lactones** Anemonin (dimer), protoanemonin (precursor to anemonin).

**Triterpenoids** Glycosides based on the sapogenins hederagenin and oleanolic acid, with arabinose, glucose and rhamnose, as sugar moieties.<sup>(1)</sup>

**Other constituents** Tannin and ascorbic acid (vitamin C).

## Food Use

Pilewort is not used in foods.

## Herbal Use

Pilewort is stated to possess astringent and demulcent properties. Traditionally, it has been used for haemorrhoids, and specifically for internal or prolapsed piles with or without haemorrhage, by topical application as an ointment or a suppository.<sup>(G7,G64)</sup>

## Dosage

**Dried herb** 2–5 g or by infusion three times daily.<sup>(G7)</sup>

**Liquid extract** 2–5 mL (1:1 in 25% alcohol) three times daily.<sup>(G7)</sup>

**Ointment** 3% in a suitable basis.

**Pilewort Ointment** (BPC 1934) 30% fresh herb in benzoinated lard.

## Pharmacological Actions

### *In vitro* and animal studies

Local antihaemorrhoidal activity has been documented for the saponin constituents.<sup>(1)</sup> Antibacterial and antifungal properties have been documented for both anemonin and protoanemonin, although anemonin is reported to exhibit much weaker activity.<sup>(G33,G48)</sup>

The reported presence of tannin constituents<sup>(G42)</sup> supports the reputed astringent activity of pilewort, although no pharmacological studies were located.

## Side-effects, Toxicity

The sap of pilewort is stated to be irritant.<sup>(G51)</sup> Protoanemonin is stated to be an acrid skin irritant, although it is readily converted into the inactive dimer anemonin.<sup>(G33)</sup> Protoanemonin is stated to have a marked ability to combine with sulfhydryl (-SH) groups and it is thought that the toxic subdermal properties of protoanemonin may depend on the inactivation of enzymes containing -SH groups.<sup>(G33)</sup> An LD<sub>50</sub> value (mice, intraperitoneal injection) for anemonin has been reported as 150 mg/kg body weight.<sup>(G48)</sup>

## Contra-indications, Warnings

Pilewort is not recommended for internal consumption.<sup>(G49)</sup> Topical use of pilewort may cause irritant skin reactions.

**Pregnancy and lactation** The safety of pilewort has not been established. It is not recommended for

internal consumption;<sup>(G49)</sup> in view of this and the potential irritant action, the use of pilewort during pregnancy and lactation is best avoided.

### Pharmaceutical Comment

Limited information is available on the chemistry of pilewort. Little scientific information was located to justify the herbal uses, although antihaemorrhoidal activity has been documented for the saponin constituents. In view of the toxic and irritant properties

stated for protoanemonin, the excessive use of pilewort is not advisable.

### References

*See also* General References G9, G10, G33, G36, G37, G40, G42, G48, G49, G57 and G64.

- 1 Texier O *et al.* A triterpenoid saponin from *Ficaria ranunculoides* tubers. *Phytochemistry* 1984; 23: 2903–2905.