



GLECHOMA L. – GENUS

Order: Lamiales Bromhead

Family: *Lamiaceae* Martinov

Subfamily: Nepetoideae (APG IV)

Tribe: Mentheae

Subtribe: Nepetinae (APG IV)

Botanical notes

The *Glechoma* L. genus includes, at present, seven accepted species: *Glechoma biondiana* (Diels) C.Y.Wu & C.Chen, *Glechoma grandis* (A.Gray) Kuprian., *Glechoma hederacea* L., *Glechoma hirsuta* Waldst. & Kit., *Glechoma longituba* (Nakai) Kuprian., *Glechoma* × *pannonica* Borbás, *Glechoma sardoa* (Bég.) Bég., and *Glechoma sinograndis* C.Y.Wu. [POWO]

These species can be geographically divided into two groups:

- the (mostly) European species:
 - *Glechoma hederacea* L., whose native range is Europe to Russian Far East and Xinjiang;
 - *Glechoma hirsuta* Waldst. & Kit. (syn.: *Glechoma hederacea* subsp. *hirsuta* (Waldst. & Kit.) Gams, or *Glechoma hederacea* var. *hirsuta* (Waldst. & Kit.) P.Fourn), whose native range is E. Central & SE. Europe;
 - *Glechoma sardoa* (Bég.) Bég. (syn.: *Glechoma hederacea* subsp. *sardoa* (Bég.) Soó, or *Glechoma hederacea* subsp. *sardoa* Bég.), native and endemic to Sardinia;
 - *Glechoma* × *pannonica* Borbás, a hybrid (between *G. hederacea* × *G. hirsuta*) whose native range is Europe (Baltic States, East European Russia, Hungary, Ukraine);
- the Far Eastern species:
 - *Glechoma biondiana* (Diels) C.Y.Wu & C.Chen, whose native range is Central & S China;
 - *Glechoma grandis* (A.Gray) Kuprian. (syn.: *Glechoma hederacea* var. *grandis* (A.Gray) Kudô, or *Glechoma hederacea* subsp. *grandis* (A.Gray) H.Hara), whose native range is SE. China, Japan to Taiwan;
 - *Glechoma longituba* (Nakai) Kuprian. (syn.: *Glechoma hederacea* var. *longituba* Nakai, *Glechoma grandis* var. *longituba* (Nakai) Kitag), whose native range is Russian Far East to Vietnam.
 - *Glechoma sinograndis* C.Y.Wu, whose native range is China (Yunnan).

They all grow primarily in the temperate biome. *Glechoma grandis* (A.Gray) Kuprian. is the only species native to Japan and Taiwan.

Glechoma hederacea has widely naturalized in New Zealand, Alaska, Argentina, Azores, and temperate North America. [POWO]

In molecular phylogenetic studies, the genus *Glechoma* appears divided into three geographically distinct major monophyletic groups: Europe (and U.S.A., where *G. hederacea* has been introduced), China-Korea, and Japan. [Jang, Jang2]

G. hederacea in Europe (and U.S.A.) forms a monophyletic and well-supported clade with *G. sardoa*, with *G. hirsuta* falling as a sister to this clade. [Jang, Jang2]

G. grandis from Japan and *G. longituba* from Korea and China form each a monophyletic well-supported clade. [Jang, Jang2]

GLECHOMA HEDERACEA L.



<i>Primary functionality:</i>	Venus [Culpeper]
<i>Secondary functionality:</i>	
<i>Nature:</i>	Hot and dry
<i>Taste:</i>	Bitter, aromatic, pungent, slightly astringent and slightly salty.
<i>Tropism:</i>	Lungs (respiratory system), kidneys, bladder, ureters (urinary system), middle ear, liver and gallbladder; connective tissue
<i>Humoral actions¹:</i>	Eliminates perverse phlegm, perverse bile and melancholia and mixed phlegmatic-bilious and phlegmatic-melancholic “residues”, perverse tension; supports correct yellow bile and tension
<i>Clinical actions:</i>	Abstersive, alexipharmic, alterative, antiasthmatic, anticatarrhal, anti-inflammatory, antiscorbutic, aperient, astringent, bechic, cicatrizing, diaphoretic, diuretic, emmenagogue, expectorant, lithontriptic, mucolytic, pectoral, stimulant, tonic, vulnerary
<i>Used parts:</i>	The whole plant, either when in flower or not (usually without roots)

¹ See the “Notes on humors” paragraph.

Description

The various *Glechoma* species have been used in herbal medicine throughout the world. While *G. hederacea*, *G. hirsuta* and *G. sardoa* have been primarily employed in Europe and U.S.A., *G. longituba* (Nakai) Kuprian (Herba Glechomae, *Lián qián cǎo*, 連錢草) is the principal species used in China and Korea, and *G. grandis* (A.Gray) Kuprian. (*Kakidōshi*, カキドオシ) is traditionally used in Japan (together with *G. longituba*).

G. hederacea is seldom used today. While, according to Dr. John Quincy (*London Pharmacopoeia*, 1736), during the XVIII century the herb was “*mightily used both in the Shops and common Prescriptions*” and “*prescribed in almost all Distempers of the Lungs*”, ground ivy is nowadays seldom mentioned at all in herb books. [Wood]

Several authors identified Dioscorides’ *χαμαίκισσος* (*chamaikissos*, IV 125), Greek for ‘*ivy of the ground*’, as *G. hederacea*. According to Dioscorides and Galen the leaves and the flowers of *chamaikissos* are bitter, and in decoction they treat sciatica and obstructions of the liver; Pliny tells they also treat obstruction of the spleen. [Tobyn]

Not all authors agree with this identification. Mattioli, for example, clearly tells (“*Discorsi*”, Lib. IV, Chap. 128, “*Del Camecisso , cioè Edera minore*”) that *chamaikissos* cannot be identified with *Glechoma hederacea*, because of the morphological differences between the two plants and particularly because of the differences in shape and color between the flowers (described by Dioscorides as similar to *leukoion*, the white violet, in *chamaikissos*). [Mattioli, Tobyn]

This notwithstanding, the clinical actions attributed to *chamaikissos* have been associated to ground ivy in some herbals (e.g., Culpeper’s, Durante, Gerard’s, Mrs. Grieve’s). It’s hard to tell, simply by comparing the sources, whether these actions appertain to *G. hederacea* too or they are the vestige of a “historical” error in plant identification.

For instance, Castore Durante tells that “*the leaves drunk with water for forty days cure the sciatica, and the same drink made with wine helps the overflow of the gall. The same decoction made with water is beneficial for dysentery. Made with wine, it provokes urine and menses, drive away poisons, and helps in the oppilations of the liver and spleen.*”. [Durante]

Interesting enough, *Chamaecissos* Lunell (1916) is one of the synonyms of the generic taxa *Glechoma* L.

Ground ivy has been attributed a lot of effects, to the point that some authors considered the reputation of the herb exaggerated. William Salmon published an extensive list of actions in its *Botanologia* [Salmon]. Some authors stated that it would cure jaundice, asthma, hypochondria, and even mania (es., [Felter]), but, for example, William Cook believed “*this reputation [...] too fabulous to be entertained, though it points to the fact that this article will mildly open the gall-ducts, and allay irritability and impart tone to the nervous system. It is rarely used for any thing but coughs of the milder class.*” [Cook]

Ground ivy is described as excellent “*in all disorders of the breast and lungs, and in those of the kidneys, and against bloody and foul urine*” [Hill]. Moreover, “*it is said to be gently stimulant and tonic, diuretic, and aperient*”, and useful “*in chronic pulmonary and urinary catarrhs.*” [Remington]

Generally speaking, ground ivy is useful in *hot and damp* conditions, that is, characterized by both inflammation and dampness (i.e., respiratory, urinary or gastrointestinal catarrh, some forms of jaundice, and so on).

Ground ivy has an expectorant and bechic action. Although it performs these functions to a lesser extent than other plants such as elecampane or horehound, it nevertheless presents, in addition, some particularly interesting features. The diterpenes contained in it reduce the bronchial secretions, while the hydroxyoctadecadienoic acids inhibit the excessive immune-allergic response that typically accompanies acute and chronic bronchitis, rhinitis and other conditions of the respiratory tract. The bacteriostatic activity supports the overall action of the phytocomplex. The diterpenes typical of Lamiaceae also exert a sedative effect on the central nervous system. [Rossi]

It's great for leaky, stuffy head colds, great for sore throats where the irritation heads up into the ears, sometimes awesome for tinnitus, good for irritable damp coughs. [McDonald]

According to Matthew Wood, ground ivy *“seems to act on the middle ear. It is effective in head colds, when the tubes of the middle ears are involved, or in any chronic respiratory congestion where the problem began with blockage in the Eustachian tubes.”* [Wood]

There may be a kidney weakness associated with the pattern. It appears to possess peculiar suitability as a medicine useful in pulmonary complaints, when a tonic for the kidneys is required, and is well adapted to all kidney complaints. [Grieve, Wood]

In some Serbia's ethnobotanical studies, *G. hederacea* is described as having a tonic effect on the bronchial system. Both *G. hederacea* and *G. hirsuta* are mentioned to treat tuberculosis, bronchitis, cough, and influenza. [Marković]

Ground ivy is suited for both acute and chronic affections. According to Roger and Hildegard Kalbermatten, it is *“particularly indicated in case of long, persistent and consumptive illnesses, if one loses faith in the internal therapeutic powers, in case of diseases of the respiratory organs such as colds, pharyngitis, bronchitis, asthma, as a spring cure and in metabolic diseases. Ground ivy awakens trust in self-healing forces, in the healer within us. It opens our eyes so that we can understand that we cannot do everything alone and that – if we have the right attitude – help is already present. The essence of ground ivy never intervenes forcefully. It embodies calm, patience, inner stillness and trust in beneficial natural forces. Ground ivy strengthens humans' faith in the marvelous and in life itself”*. [Kalbermatten]

And yet, *“its insignificant and dwarf form has within itself an extremely lively luminous and calorific essence that passes through and revitalizes the processes interrupted and frozen by the internal cold, heating them. Ground ivy provides us with the relaxing ability to renovate the states to which – consciously or unconsciously – we had clung too much and which, therefore, are no longer included in the lively process of continuous evolution. Processes that have been frozen for a long time can then return to the flow of life. Ground ivy puts an end to the severity of winter and to the darkness, thanks to its relaxing, heating and luminous power and thus makes new energy flow through our veins”*. [Kalbermatten]

The essence of the plant can be summed up in the expression: *“detachment and renewal, calm and warmth that awakens life”*. [Kalbermatten]

Matthew Wood also reports some indications from Alma Hutchins: it regulates the heartbeat by making the blood more fluid, and is suitable in nervous problems like sciatica, hip gout, arthritis of the hands and knees, and in endocrine conditions, like premature aging. [Wood]

An alcoholic extract of *G. hederacea* L. has been employed as an active ingredient (together with sunflower oil) in supplements (Gallith, Hitrechol Aihuo Dantong, Hitrecol®) for reducing

gallstones and related complaints. *G. hederacea*² has been shown to quench the inflammatory process caused by mechanical irritation attributable to stones in the gallbladder wall, to relax the bile ducts facilitating the flow of bile, and to exert a litholytic/antilithogenic and liver-protective effect. The supplement is indicated for the treatment of early-stage cholesterol gallstones as well as solitary and multiple cholesterol gallstones. [Cochranlib, Xiao]

For the Asiatic congeneric *G. longituba*, it has been found that both the water and ethanol extracts can promote bile secretion by liver cells and can relax the biliary sphincter to facilitate bile excretion. Moreover, the plant can reduce the concentration of total bilirubin and direct bilirubin in the bile, increase the concentration of bile acid and reduce the formation of gallstones [Yang].

Another interesting action of ground ivy is the ability to remove some heavy metals from the body. W. T. Fernie notes (*"The Organic Materia Medica"*, Detroit, U.S.A., 1890) that painters use ground ivy (named *Nepeta glechoma* in the article) as a remedy for, and a preventative of, lead colic. Also Maude Grieve mentions it. *"Contemporary herbalists such as Kate Gilday and David Winston have confirmed this use in practice. There is speculation and some experience to suggest that it removes other heavy metals such as mercury, and perhaps petrochemical pollutants as well."* [Wood]

American Herbalist Jim McDonald confirms this: *"Noted to increase urinary excretion of lead (like, actually measured, not rumored) ... Herbalist David Winston shared with me: 'Many years ago while reading Maude Grieve's Modern Herbal I found a mention that Ground Ivy was useful for treating Painter's Colic. Not knowing what that was, I looked it up (pre-google days) and found it referred to lead poisoning. I wondered for years whether it just relieved symptoms or if it actually enhanced lead excretion. Finally I had a patient with very elevated lead levels and decided to try giving Ground Ivy (tincture) to see if it would make any difference. It reduced lead levels (as determined by serum lead levels) and it increased urinary lead excretion. It is now some 30 years later and I have used it many times with significant success, as have many herbalists I have mentioned this to. I do not believe there are any human studies to back up my clinical experience, but the empirical evidence is intriguing. There are other uses for the herb as well including treating hot/damp lung infections, expelling gallstones and relieving tinnitus. I use it as a fresh tincture 1:2, a usual dose is 1.5 - 2 mL TID.³"* [McDonald]

The plant in late spring/early summer or autumn is covered by galls caused by the puncture of an insect, *Liposthenes glechomae* Linnaeus, 1758 (syn.: *Cynips glechomae* Linnaeus, 1758; *Aulax glechomae* Hartig, 1841). Such galls have a strong aromatic flavor reminiscent of the plant and are sometimes eaten by the peasantry of France. [Cloquet, Grieve, Réaumur] These galls can be eaten as a remedy to burning thirst or to a dry mouth. [Cloquet]

The galls look like hairy tumors, so Matthew Wood consider them a signature for cancer. Specifically, according to the author, ground ivy is *"indicated in cancer cases when the tongue looks like 'chopped meat' in the middle – that is, when heat is disorganizing the tissues"*. Indeed, ground ivy is employed as a traditional cancer remedy. [Wood]

The action of ground ivy on serum proteins, despite being mainly hyaline and exudative, is rather complex, covering the tissue phases of inflammation (phase 2), deposition (phase 3), fibrosis (phase 4) and necrosis (phase 5). This makes the plant suited to be used in various conditions, including systemic ones. [DewitLeunis]

² Cultivated in Central Europe, growing in shady places [Xiao], so presumably it is *G. hederacea* L. s.s. In traditional Chinese medicine, *G. longituba*, too, is frequently prescribed to patients with cholelithiasis; this herb has shown hepatoprotective, anti-inflammatory, and anti-fibrotic effects in a study [Wanga] (see also [Yang, Zhou]).

³ *"Ter in die"* = thrice in a day.

Ground ivy is edible and its leaves can be used to prepare soups and omelettes.

Glechoma sardoa (Bég.) Bég. is traditionally used, in Sardinia, in a similar way to *G. hederacea*⁴: internally, as a bitter tonic and diuretic herb, but above all as a pectoral in catarrh, bronchitis and diseases of the respiratory tract, or as an anti-asthmatic (infusion of leaves or stem and flower, possibly sweetened with honey); externally, as a vulnerary-cicatrizing agent in case of wounds, sores, ulcers and abscesses, as a healing-epithelizing agent in burns and as an anti-neuralgic/anti-rheumatic herb. [Atzei]

The aerial parts of *Glechoma longituba* (Nakai) Kuprian (syn.: *Glechoma hederacea* var. *longituba* Nakai) are used in Chinese Medicine. *Lián qián cǎo* is classified among the herbs that drain dampness (diuretics). It is slightly sweet, slightly cold and enters the Liver, Kidney and Bladder meridians. [AmDragon]

It's used to clear Heat, promote urination, alleviate cough, eliminate Stasis, reduce swellings and resolve toxicity, in case of Jaundice, edema, urinary tract stones, malarial disorder, Lung abscess, cough, hematemesis, turbid painful urinary dysfunction, stranguria, vaginal discharge, Wind-Damp Bi, childhood nutritional impairment, swollen sores, dermatosis and eczema. [AmDragon]

Since *Lián qián cǎo* has been classified as a subspecies of *G. hederacea*, in many journal articles it is referred to simply as *G. hederacea* (instead of *G. hederacea* var. *longituba* or *G. longituba*). Anyhow, it's important to note that *G. hederacea* and *G. longituba* are even phylogenetically distinct (see paragraph "*Botanical notes*"). This notwithstanding, the clinical actions of *G. hederacea* L. sensu strictu and *G. longituba* (Nakai) Kuprian seems quite superimposable.

In the *G. hederacea* L. phytocomplex the following active substances have been found: flavonoids (isoquercitrin, hyperoside, apigenin, luteolin and related glycosides), essential oil (0.05%: pinocanfone, pulegone, menthone, pinene, limonene, isomenthone, linalool, menthol), diterpenes (glechonine, marrubin), germacranic sesquiterpenes (glechomafuran), tannins (7%), pyrroline alkaloids (hederacin A, hederacin B), triterpenes, amines, phenolic acids, iridoids, 9-hydroxy-10,12-octadecadienoic acid, dimorphecholic acid, choriolic acid. [Kumarasamy, Rossi]

Properties

Temperature and taste

The plant has been described as bitter and aromatic [Durante, Gerard, Mattioli, Wood], acrid, "metallic" [Wood], as having an unpleasant odor, and a harsh, bitterish, slightly aromatic taste [Felter], or "*a quick, sharp, and bitter*" taste. [Culpeper]

Indeed, the leaf taste is quite complex, and can be described as bitter, aromatic, pungent, slightly astringent and slightly salty.

The pungency of ground ivy is a mix of acrid and "tingling" taste, and persist some time after chewing the leaves.

The degree of pungency and bitterness and the "strength" of the aroma are variable, and usually they are stronger in younger leaves. The older leaves and especially the leaf stalks are slightly saltier than the younger leaves.

⁴ Let us remember that *G. sardoa* (Bég.) Bég. and *G. hederacea* L. constitute a monophyletic clade (see paragraph "*Botanical notes*").

The aromatic taste can be described as a mixture of *Stachys sylvatica* (typically described as unpleasant) and *Salvia officinalis*, with a herbaceous hint.

Ground ivy has been classified as either hot and dry [Culpeper, Durante, Gerard, Salmon] or cool and dry [Holmes, Wood]. The congeneric *G. longituba* is classified as slightly cold in Chinese Medicine. This is due to the difference between the theoretical models on which the classifications are based. Very often, plants that have a cooling effect are classified as “cool/cold”: this is what happens usually in Chinese Medicine and often in American herbalism. In humoral (Hippocratic-Galenic) medicine the “temperature” of an herb is determined mostly by its taste: an aromatic and/or pungent herb (like ground ivy) is always classified as “hot”, regardless of the net warming or cooling effect on the body.

Indeed, in humoral medicine, the body can be cooled by either a cool/cold herb (that works “by antipathy”, opposing to the internal heat) or by a moderately hot herb that sets the internal heat in motion and moves it out of the body, producing an overall cooling effect. This is exactly what happens with ground ivy, that is classified, for this reason, as hot and dry (in the first degree according to [Salmon]).

Some actions of the herb derive from being hot and dry, and bitter. According to Castore Durante, for instance: “*The whole plant is bitter, & acute; so it can be judged that it is hot and dry & that it can easily asterge, thin, & open.*” [Durante]

Signature

According to Culpeper, ground ivy “*is an herb of Venus, and therefore cures the diseases she causes by sympathy, and those of Mars by antipathy.*” [Culpeper]

Tissue Phases

2 (inflammation), 3 (deposition), 4 (fibrosis), 5 (necrosis). [DewitLeunis]

Actions and indications

Humoral actions

Being bitter, aromatic and pungent, as well as hot and dry, ground ivy eliminates perverse phlegm, both that which is simply in excess and that which is more or less thickened (e.g., chronic catarrhs). It also eliminates perverse bile and melancholia and mixed phlegmatic-bilious and phlegmatic-melancholic “residues” (e.g. gallstones and urinary stones). It resolves some cases of perverse tension (cough, asthma; it is emmenagogue, diaphoretic, ...) and supports correct yellow bile and tension (it is tonic, warms the cold stomach, ...).

Tropism

Lungs, pectoral (respiratory system) [Blackwell, DewitLeunis, Salmon], *kidneys*, bladder, ureters (urinary system) [Grieve, Wood, Salmon], *middle ear* [Wood], *liver* and *gallbladder* [Cochranelib, Durante, Grieve, Xiao, Yang]; *connective tissue*⁵.

⁵ Heavy metal and toxin drainage.

Clinical actions

Abstersive, alexipharmic, alterative, antiasthmatic, anticatarrhal, anti-inflammatory, antiscorbutic, aperient, astringent, bechic, cicatrizing, diaphoretic, diuretic, emmenagogue, expectorant, lithontriptic, mucolytic, pectoral, stimulant, tonic, vulnerary.

Principal actions

- Abstersive. [Salmon]
- Alexipharmic [Culpeper, Durante, Salmon]:
 - Liter.: “[*The same decoction*] made with wine, provokes urine and menses, drive away poisons, and helps in the oppilations of the liver and spleen.” [Durante]
 - Liter.: “[*The Essence*] is good against Poison and Plague.” [Salmon]
 - Liter.: “[*Expelleth venom or poison, and also the plague.*” [Culpeper]
- Alterative. [Salmon]
- Antiasthmatic. [DewitLeunis]
- Anticatarrhal. [DewitLeunis, Quer]
- Anti-inflammatory. [Kalbermatten]
- Antiscorbutic [Blackwell, Grieve]:
 - Liter.: “[*The expressed juice [...] is also employed as an antiscorbutic, for which it has a long-standing reputation.*” [Grieve]
- Aperient. [Blackwell, Remington, Salmon]
- Astringent. [Grieve]
- Bechic. [Blackwell, Grieve, McDonald, Rossi, Salmon, Wood]
- Diaphoretic [Grieve]:
 - Liter.: “[*The expressed juice of the fresh herb is diaphoretic, diuretic and somewhat astringent.*” [Grieve]
- Diuretic (infusion/decoction⁶). [Blackwell, Culpeper, Durante, Grieve, Quer, Remington, Salmon]
- Emmenagogue [Culpeper, Durante, Salmon]:
 - Liter.: “[*provokes Urine and the Courses, facilitates the Birth*” [Salmon]
- Expectorant. [DewitLeunis, Rossi], mucolytic [Rossi]
- Lithontriptic, for both urinary stones [Holmes, Salmon] and gallstones (as a litholytic/antilithic) [Cochranelib, Xiao].
- Pectoral [Blackwell, Grieve, Felter]:

⁶ Ground ivy exerts a diuretic action mainly when taken in the form of infusion and/or decoction, rather than as a tincture.

- Liter.: *“This Plant is esteem’d a very good Pectoral, being much used for Coughs, Shortness of Breath and other Disorders of the Lungs; for which a Tea made of the Leaves & a Syrup of the Juice is very beneficial.”* [Blackwell]
- Stimulant [Felter, Grieve, Kalbermatten, Pelikan, Remington]:
 - Gently stimulant. [Grieve, Remington]
 - Stimulates the metabolism [Kalbermatten, Pelikan], especially in spring [Pelikan].
- Tonic [Felter, Grieve, Marković, Quer, Remington]:
 - Tonic effect on the bronchial system. [Jarić, Marković]
 - Tonic effect on the urinary system. [Jarić]
 - Liter.: *“An astringent, diuretic, tonic effects on the bronchial and urinary system.”* [Jarić]
- Vulnerary, cicatrizing [Culpeper, Durante, Gerard, Grieve, Hill, Holmes, Mattioli, Quer, Rossi, Salmon]:
 - for all wounds, internal and external. [Culpeper, Durante, Grieve, Hill, Holmes, Mattioli, Salmon]
 - Liter.: *“For all inward wounds, ulcerated lungs and other parts.”* [Culpeper]
 - Liter.: *“This plant has a special virtue of consolidating the intrinsic wounds of the body, wherever they may be.”* [Durante] (simil. [Mattioli])
 - for old sores. [Salmon]
 - for ulcers and fistulas. [Culpeper, Durante, Gerard, Grieve, Mattioli, Salmon]
 - for bruises and ‘black eyes.’ [Grieve]
 - for burnings. [Gerard]

Specific indications

General

Congestion of the spleen [Pelikan, Wood], lymphatics [Wood], and liver [Pelikan].

- Cfr. also Culpeper: *“[it] helps [...] melancholy, by opening the stoppings of the spleen.”*⁷ [Culpeper]

Scurvy [Blackwell, Grieve]:

Scrofula [Pelikan].

⁷ Here, Culpeper refers to the Hippocratic-Galenic concept of melancholy as a humor produced by the Spleen: “stoppings” of this organ or a physical spleen enlargement would produce melancholic diseases.

Fever

Spasms resulting from fever. [Wood]

Influenza. [Marković, Šarić-Kundalić]

Ague (decoction). [Šarić-Kundalić]

Mind

Depression. [Wood]

Mancanza di fiducia nelle proprie possibilità di guarigione. [Kalbermatten]

Head

Headache [Felter, Grieve, Wood]:

- Nervous headaches. [Grieve]
- Liter.: *“Alma Hutchins (1992, 1) says, ‘The fresh juice snuffed up the nose often takes care of most deep-rooted, long-established headaches.’”* [Wood] (simil. [Felter])
- Liter.: *“The expressed juice of the fresh herb is diaphoretic, diuretic and somewhat astringent; snuffed up the nose, it has been considered curative of headache when all other remedies have failed. A snuff made from the dried leaves of Ground Ivy will render marked relief against a dull, congestive headache of the passive kind.”* [Grieve]

Sinusitis. [Marković]

Ears

Tinnitus [Culpeper, Gerard, Grieve, Kress, McDonald, Salmon, Wood]:

- Liter.: *“Ground-ivy is commended against the humming noyse and ringing found of the eares, being put into them, and for them that are hard of hearing.”* [Gerard]
- Liter.: *“Ground ivy has been traditionally used as a remedy for the inner ear-humming sounds, ringing noises, and hardness of hearing. This usage has been confirmed in modern times.”* [Wood]
- Liter.: *“Astonishing for tinnitus. [...] It’s one of the few herbs that can touch noise-induced tinnitus. A lot of people [had] been on disability for their tinnitus for years. I know because quite a few told me. It’s 2-3 cups of tea for weeks or months on end, or until the noise stops.”* [Kress]
- Liter.: *“It’s [...] sometimes awesome for tinnitus.”* [McDonald]

Deafness, loss of hearing (external, juice put into the ears) [Culpeper, Gerard, Grieve, Salmon, Wood]:

- Liter.: *“The juice dropped into the ears, doth wonderfully help the noise and singing of them, and helpeth the hearing which is decayed.”* [Culpeper]

Eyes

Inflammation, floaters, cataract; both in men and animals; as an eyewash [Culpeper, Gerard, Salmon]:

- Liter.: *“Ground-Ivy, Celandine, and Daisies, of each a like quantitie, stamped and strained, and a little sugar and rose water put thereto, and dropped with a feather into the eies, taketh away all manner of inflammation, spots⁸, webs⁹, itch, smarting, or any griefe whatsoever in the eyes, yea although the fight were nigh hand gone : it is proued to be the best medicine in the world. [...] The herbes stamped as aforesaid, and mixed with a little ale and honey, and strained, take away the pinne and web¹⁰, or any griefe out of the eyes of horse or cow, or any other beast, being squirted into the same with a syringe, or I might haue said the liquor injected into the eies with a syringe.”* [Gerard]
- Liter.: *“The Ophthalmick, or Eye-Wash. ℞ Juice of Alehoof iij. ounces; Juice of Celandine, Juice of Daisies, Rose Water, Honey, of each j. ounce, mix and dissolve, then drop it into the Eyes: It helps all Inflammations, Spots, Pin and Web¹¹, Itch, Smarting, and most other Disaffections of that part; and Cures, tho’ almost Blind. Use it 5 or 6 times a day, or oftner.”* [Salmon]
- Liter.: *“The juice of celandine, field-daisies, and ground-ivy clarified, and a little fine sugar dissolved therein, and dropped into the eyes, is a sovereign remedy for all pains, redness, and watering of them; as also for the pin and web¹², skins and films¹³ growing over the sight; it helpeth beasts as well as men.”* [Culpeper]

Styes (external use). [Wood]

Sore eyes (external use). [Grieve, Wood]

Weak eyes (external use) [Grieve]:

- Liter.: *“The infusion is also used with advantage as a wash for sore and weak eyes.”* [Grieve]

Mouth

Ulcers, sores (as a gargle). [Culpeper, Durante, Gerard, Wood]

Gum problems (mouthwash). [Holmes]

8 Floaters.

9 ‘Pin and web’ is an obsolete expression that is used to mean either ‘caligo and pterygium’ or, more generally, the cataract.

10 See note 9.

11 See note 9.

12 See note 9.

13 Here, presumably, the reference is always to the appearance of excess conjunctival tissue (pterygium) and opacification of the cornea and/or lens (caligo).

Respiratory system

Respiratory tract conditions [Blackwell, Grieve, Felter, Hill, Marković, Quer, McDonald, Rossi]:

- Liter.: *“This Plant is esteem’d a very good Pectoral, being much used for Coughs, Shortness of Breath and other Disorders of the Lungs; for which a Tea made of the Leaves & a Syrup of the Juice is very beneficial.”* [Blackwell]
- Liter.: *“It is excellent in all disorders of the breast and lungs.”* [Hill]
- Soreness of breast. [Salmon]
- Expectorant and mucolytic in respiratory tract conditions with an allergic and inflammatory component (rhinitis, tracheitis, asthma, etc.). [Rossi]
- *Hot/damp* lung infections [McDonald], respiratory infections [Marković].

Throat problems [Holmes], sore throats [McDonald], pharyngitis, [Kalbermatten], tracheitis [Rossi].

- Liter.: *“It’s great [...] for sore throats where the irritation heads up into the ears.”* [McDonald]

Cold, catarrh [DewitLeunis, Kalbermatten, Holmes, McDonald, Remington, Rossi, Salmon, Wood]:

- *Acute head colds; especially with congestion in the tubes of the ear, middle ear infection.* [Wood]
- Head colds [McDonald, Wood]:
 - Head colds, when the tubes of the middle ears are involved. [Wood]
 - Liter.: *“It’s great for leaky, stuffy head colds.”* [McDonald]
- Rhinitis, nasal congestion. [Holmes, Rossi, Wood]
- Bronchial catarrh. [Holmes]
- Chronic pulmonary catarrhs. [Remington]
 - Liter.: *“Peculiar against vehement Coughs and Catarrhs”* [Salmon]

Bronchitis. [Jarić, Kalbermatten, Marković, Šarić-Kundalić]

Pneumonia [Scholten, Zhou] and related after-effects [DewitLeunis]:

- Liter.: *“Excels in pleuropneumonic sequelae”* [DewitLeunis].

Chronic respiratory problems [Quer, Remington, Wood]:

- *Chronic respiratory problems, congestion in the lungs;* especially when there has been middle ear congestion. [Wood]
- Chronic pulmonary catarrhs. [Remington]
- Chronic bronchitis (2 teaspoons of tincture per day) [Quer].

- Bronchiectasis (2 teaspoons of tincture per day) [Quer].

Cough [Blackwell, Grieve, Marković, McDonald, Rossi, Salmon, Šarić-Kundalić, Wood]:

- Hot, wet coughs, with bubbling in the chest; it can aggravate other coughs. [Wood]
- Sub-acute coughs, with debility. [Cook]
- Irritable damp coughs. [McDonald]
- with laryngeal and tracheal irritation. [Boericke, Scholten]

Dyspnea, wheezing, shortness of breath [Blackwell, DewitLeunis, Kalbermatten, Salmon], asthma [DewitLeunis, Felter, Kalbermatten, Marković, Pelikan, Rossi, Salmon] [Felter]; some authors disagree ([Cook]).

Phthisis, ulcerations of the lungs, pulmonary hemorrhage [Culpeper, Grieve, Marković, Salmon, Šarić-Kundalić], tuberculous diseases of the respiratory system [Pelikan]:

- Liter.: *“The Syrup. It is peculiar against an old Cough, and other Distempers of the Brest and Lungs, as Catarrhs, Wheezings, Asthma’s, Ulcers of the Lungs, spitting of Blood, &c. Let it be often taken with a Liquorice Stick: or it may be taken a large spoonful at a time, as oft as need requires.”* [Salmon]
- Liter.: *“The Lohoch. It is made of the clarified Juice, mixed with clarified Honey in equal proportions: and is good against the most vehement and violent Coughs, very powerful against Phthisicks, or Ulcerations of the Lungs, causing a speedy healing; let it be taken with a Liquorish Stick oftentimes in a day.”* [Salmon]
- Liter.: *“A singular herb for all inward wounds, exulcerated lungs.”* [Culpeper]
- Liter.: *“It has even been extolled before all other vegetable medicines for the cure of consumption.”* [Grieve]
- Liter.: *“Juice and tea for tuberculosis, bronchitis and pulmonary bleeding.”* [Šarić-Kundalić]

Digestive system

Digestive ailments (decoction). [Šarić-Kundalić]

Dyspepsia [Wood], improves appetite (tea) [Jarić].

Indigestion. [Grieve]

Soreness of stomach, coldness of the stomach. [Salmon]

Weakness of the digestive organs. [Grieve, Pelikan]

Gastrointestinal system

Gastrointestinal ailments (decoction). [Šarić-Kundalić]

Diarrhea, dysentery [Durante, Jarić]:

- Liter.: *“The same decoction made with water is beneficial for dysentery.”* [Durante]

Gastrointestinal catarrh. [Wood]

Colic, bloating, gas [Blackwell, Culpeper, Grieve, Salmon, Wood]:

- with griping pains. [Wood]
- Liter.: *“[The Spirituous Tincture] prevails against Catarrhs, coldness of the Stomach, spitting Blood, Wind, Pains, Gripings, and other like Disaffections of Stomach, Liver, Spleen and Bowels”* [Salmon]
- Liter.: *“Being drank, in a short time it easeth all griping pains, windy and choleric humours in the stomach, spleen or belly.”* [Culpeper]

Liver and gallbladder

Jaundice [Culpeper, Durante, Felter, Gerard, Grieve, Pelikan, Salmon]; some authors disagree ([Cook]):

- from stoppage of the gallbladder or liver [Culpeper, Salmon, Wood]:
 - Liter.: *“[The Essence] helps the Yellow Jaundice, by opening the Obstructions of the Viscera.”* [Salmon]
 - Liter.: *“Helps the yellow jaundice, by opening the stoppings of the gall and liver, and melancholy, by opening the stoppings of the spleen.”* [Culpeper]
- Liter.: *“[Halfe a dram of the leaues being drunk in foure ounces and a halfe of faire water] taken in like sort six or seuen daies doth also cure the yellow jaundise.”* [Gerard]
- Liter.: *“The leaves drunk with water for forty days cure sciatica, & the same drink made with wine helps the overflow of gall.”* [Durante]
- Liter.: *“[The juice] is profitable against the Jaundice, Catarrhs and Rhumatisms; it has Cured many (says Hollerith) at point of Death.”* [Salmon]
- Liter.: *“The Poulder. It is made of the dryed Leaves; [...] it is said to Cure the Yellow Jaundice in 7. or 8. days, and in 40. or 50. days the Sciatica.”* [Salmon]

Congestion of liver. [Pelikan]

Gall stones [Cochranelib, McDonald, Xiao] (also see [Yang, Zhou] mostly for *Glechoma longituba*).

Urinary system

Urinary tract conditions [Blackwell, Felter, Grieve, Hill, Quer] and bladder disorders [Pelikan]:

- Liter.: *“It is this Plant that they make the Gill Ale with, being accounted antiscorbutic and apperative, and good to provoke Urine & cleanse ye Ureters.”* [Blackwell]
- Liter.: *“It is excellent in all disorders of the breast and lungs, and in those of the kidneys, and against bloody and foul urine.”* [Hill]
- Liter.: *“As a medicine useful in pulmonary complaints, where a tonic for the kidneys is required, it would appear to possess peculiar suitability, and is well adapted to all kidney complaints.”* [Grieve]

Urinary tract infections [Hill, McDonald, Wood]:

- Liter.: *“It’s [...] virtuous for urinary tract infections.”* [McDonald]
- Bloody and foul urine. [Hill, Wood]
- with catarrhal discharges, cystitis [Cook, Remington]:
 - Aching and catarrhal discharges of the bladder. [Cook]
 - Chronic urinary catarrhs. [Remington]

Urinary sand, stones and gravel [Holmes, Pelikan, Salmon] (also see [Yang, Zhou] mostly for *Glechoma longituba*).

Hematuria. [Hill, Holmes, Wood]

Sex organs

Ulcers, sores (as a wash) [Culpeper, Durante, Salmon]:

- Liter.: *“If you put to the decoction some honey and a little burnt alum, it is excellently good to gargle any sore mouth or throat, and to wash the sores and ulcers in the privy parts of man or woman.”* [Culpeper]

FEMALE

Amenorrhoea, dysmenorrhoea [Durante, Salmon]:

- Liter.: *“[The same decoction] made with wine, provokes urine and menses, drive away poisons, and helps in the oppilations of the liver and spleen.”* [Durante]

Menorrhagia¹⁴ [Gerard]:

- Liter.: *“Hedera terrestris boyled in water staieth the termes”* [Gerard]

¹⁴ This condition is described only by John Gerard and reported here for completeness only. Other authors, in fact, rather write of an emmenagogue effect (see above).

- Liter.: “*Hedera terrestris, being bound in a bundle, or chopt as herbes for the pot, and eaten and drunke in thin broth staieth the flux in women.*” [Gerard]

Osteoarticular system & limbs

Sciatica^{15,16} [Culpeper, Durante, Gerard, Grieve, Salmon, Wood]:

- Liter.: “*Dioscorides teacheth, That halfe a dram of the leaues being drunk in foure ounces and a halfe of faire water, for fortie or fiftie daies together, is a remedie against the Sciatica, or ache in the huckle bone.*” [Gerard]
- Liter.: “*Galen hath attributed (as we haue said) all the vertue vnto the floures : Seeing the floures of Ground-Ivy (saith he) are very bitter, they remoue stoppings out of the liuer , and are giuen to them that are vexed with the Sciatica.*” [Gerard]
- Liter.: “*The leaves drunk with water for forty days cure sciatica, & the same drink made with wine helps the overflow of gall.*” [Durante]

Gout¹⁷ [Culpeper, Grieve, Salmon]:

- Liter.: “*[The Essence] being Drunk with Wine for some considerable time, it is said to Cure the Sciatica, as also the Gout in Hands, Knees or Feet, dissolves and disperses the Peccant Humors, and so gives ease.*” [Salmon]
- Liter.: “*The Oily Tincture. It is good for the Sciatica or Hip Gout, as also the Gout in any other Part, proceeding from a cold Cause, being anointed very hot upon the part twice a day.*” [Salmon]
- Liter.: “*The decoction of it in wine drank for some time together, procures ease to them that are troubled with the sciatica, or hip-gout: as also the gout in hands, knees or feet.*” [Culpeper]

Rheumatism. [Salmon]

Skin

Wounds (internal and external) [Durante, Holmes, Mattioli, Salmon], old sores [Salmon].

Fistulas, ulcers, hollow ulcers¹⁸, putrid ulcers, running ulcers [Culpeper, Durante, Gerard, Grieve, Mattioli, Salmon]:

- Liter.: “*Matthiolus writeth, That the juice being tempered with Verdugrease, is good against fistulaes and hollow vlcers.*” [Gerard]

¹⁵ Also called “*hip-gout*” by Culpeper. [Culpeper]

¹⁶ These conditions are clearly reported from the to Dioscoride’s description of *chamaikissos*, so it should be verified whether they are really treated by ground ivy or are the result of a plant misidentification. See the “*Description*” paragraph for details.

¹⁷ See note 16.

¹⁸ Cavitary ulcers?

- Liter.: *“The juice mixed with verdigris works usefully to heal fistulas. The decoction of the leaves made in water or wine helps gargled the putrid ulcers of the throat. And the same decoction cures scabies, & disorders of the mouth, & of the places of women.”* [Durante]
- Liter.: *“The juice of it boiled with a little honey and verdigrease, doth wonderfully cleanse fistulas, ulcers, and stayeth the spreading or eating of cancers and ulcers.”* [Culpeper]

Bruises [Grieve]:

- Liter.: *“The expressed juice may also be advantageously used for bruises and ‘black eyes.’”* [Grieve]

Burning (ointment) [Gerard]:

- Liter.: *“They haue vsed to put it into ointments against burning with fire, gunpouder, and such like.”* [Gerard]

Warts (external use) [Durante, Mattioli]:

- Liter.: *“The fresh herb crushed between two stones, and tied over the warts, dries them, and causes them to fall.”* [Durante] (simil. [Mattioli])

Boils (external). [Holmes]

Abscesses (external) [Holmes, Grieve, Wood], tumors, gatherings [Grieve, Wood]:

- Liter.: *“Combined with Yarrow or Chamomile Flowers [the expressed juice] is said to make an excellent poultice for abscesses, gatherings and tumours.”* [Grieve]

Skin eruptions, scurvy (external). [Wood]

Allergic dermatosis [Rossi], wet eczema (external) [Holmes]:

- Vulnerary and antidyscrasic in allergic dermatoses. [Rossi]

Other

Cancer [Wood]:

- Cancer and diseases of intense heat; when the tongue is dark red in the center, red elsewhere, the center breaking up like “beefsteak.” [Wood]

Heavy metal poisoning [Felter, Grieve, McDonald, Wood]:

- *Pulls out the soft heavy metals such as lead, mercury, aluminum.* [Wood]
- Liter.: *“Fresh tincture 1:2, a usual dose is 1.5 - 2 mL TID.”* [McDonald]
- Liter.: *“An infusion of the leaves is highly recommended in lead colic, and it is stated that painters who make use of it often are never troubled with that affliction.”* [Felter]

- Liter.: “In America, painters used the Ground Ivy as a preventive of, and remedy for lead colic, a wineglassful of the freshly-made infusion being taken frequently.” [Grieve]

Hematopoietic insufficiency [Pelikan], anemia (fresh plant) [Šarić-Kundalić].

Babies; teething, colic, spasms, restlessness (decoction every few minutes until child is quiet). [Wood]

Parts used and their collection

The whole plant of ground ivy can be used (usually without roots, but they are insignificant); it is preferable, when possible, to harvest the plant when it is in flower, during the spring. However, leaves and stems are also available during the winter and can be used mostly for the preparation of extemporaneous remedies (e.g. juice, fresh plant decoction/infusion).

Preparation and dosage

Ground ivy can be used fresh or dried, but it is always preferable to use the fresh plant.

The plant can be used fresh as is (from 30 to 50 g) [Quer], dried and reduced in powder (from half a dram to a dram, corresponding approximately to 2-4g) [Felter]. It can be used for the preparation of syrup, using one part by weight of juice and at least one part by weight of sugar; in this case, Pío Font Quer reports a recommended dosage of 40-80 g [Quer]. If two parts by weight of sugar are used, the syrup becomes stable at room temperature.

In order to make the tincture, the plant should be harvested when in flower and macerated in a hydroalcoholic solution of appropriate alcohol content. The ideal final degree of the tincture is about 60° [Rossi].

Contraindications and collateral effects

Ground ivy is recognized as non-toxic and there are no known side effects of note. Furthermore, no particular contraindications are reported. [Rossi]

It is advisable to avoid or limit its use in cases of very dry conditions [Holmes]. In these cases it can be balanced with damp plants.

Since *G. longituba* enhances the contraction of smooth muscle in the uterus *in vitro* [Yang], it is advisable to avoid using *Glechoma* species or to use them with caution during pregnancy.

Homeopathy

Glechoma hederacea has not been proved thoroughly so far. William Boericke, Ton Jansen and Jan Scholten provides some information about this plant.

Plant theme

According to Ton Jansen, *Glechoma hederacea* (fam. Lamiaceae, theme need for recognition) patients feel they have to adapt themselves in order to be recognised. They are afraid of failure and of not being accepted. It is indicated in bed-wetting during the first sleep, which occurs because they do not feel that the bladder is full. It can also be prescribed for children, who are so absorbed in their games that they do not feel the urge and wet themselves. They live in a dream world. [Jansen]

Jan Scholten provides a partially similar picture. According to this author, *Glechoma* patients feel like orphans who have to adapt to be accepted and recognised by the adoptive parents. They do not rebel even to strong rules and keep a low profile because they are well off there. Lamiaceae can comply to the demands of others but a *Glechoma* patient, like an orphan, not only tries to belong to the family, but on the other hand has the feeling of not belonging. This alternation of feelings places *Glechoma* in stage 5. They are afraid to be abandoned, that when they live their own life, they will be deserted. [Scholten]

Mind

Open, desire company, talkative, asking about others, sympathetic, loving. [Scholten]

No deep intimacy but connection is needed to get in touch with one's own feelings. [Scholten]

Closed about deep affairs. [Scholten]

Lonely, sad, resigning, staying on their own, finding their own small territories. [Scholten]

Floating sensation, in a dream world. [Scholten]

Survivors. [Scholten]

Ailments, hurt from not being seen, recognised, noticed, accepted, connected. [Scholten]

Orphanage. [Scholten]

Nervous. [Scholten]

Changeable, chaotic, diverting, easily distracting with jokes. [Scholten]

Aversion to the disruption of the status quo, scales in balance; easygoing. [Scholten]

Anger but keep the emotional expression low profile. [Scholten]

Tortured by material problems, earthy thoughts, having no job, robbery, apocalypse. [Scholten]

Bookkeepers. [Scholten]

Disappointment from too high expectations. [Scholten]

Fear of failure, rejection. [Scholten]

Dreams: forgetting babies, children. [Scholten]

Colour preference: 19AB, 20-22AB. [Scholten]

General

Aversion: fat. [Scholten]

Sleep: yawning. [Scholten]

Candida. [Jansen]

Body

Nervous: hyperaesthesia. [Scholten]

Vertigo: flowing, light, floating, like ecstasy. [Scholten]

Head: headache, above the eye, pressing downward. [Scholten]

Eyes: radiating. [Scholten]

Throat: lump; oppression [Scholten]; glandula submentalis inflamed and swelling [Boericke, Scholten].

Lungs: cough with laryngeal and tracheal irritation [Boericke, Scholten]; pneumonia, < meconium. [Scholten]

Chest: oppression, nervous. [Scholten]

Stomach: nausea. [Scholten]

Intestine: Diarrhoea [Boericke].

Rectum and anus: haemorrhoids [Scholten], with rectal *irritation* and bleeding [Boericke]. Anus feels raw and sore [Boericke].

Urinary: frequent urination [Scholten]. Acts on bladder. Insensitivity of bladder and therefore decreased control over the bladder. Often successfully used for incontinence, both day and night. [Jansen]

Back: cramp in the neck, < morning, < stretching. [Scholten]

Skin: mycose footsoles. [Scholten]

NOTES

Notes on humors

According to the Hippocratic-Galenic medicine, four humors rule the human body:

- *Bile* (or *Yellow Bile*), corresponding to the Fire element, responsible for all the caloric activities of the human body, both in a physiological sense (e.g., body heat) and in a pathological sense (fever, inflammation, etc.);
- *Blood*, corresponding to the Air element and to the physical blood;
- *Phlegm* (also called *Pituita* or *Lymph*), corresponding to the Water element, responsible for everything that is fluid in the body (body fluids, lymph, blood plasma, synovial fluid, cerebrospinal fluid, etc.)¹⁹;

¹⁹ In this sense, it is conceptually different from the *Phlegm* of Chinese medicine, which corresponds specifically to the *thickened Phlegm* of humoral medicine when it is located in the upper part of the organism.

- *Melancholia* (also called *Black Bile*), corresponding to the Earth element, responsible for everything that is hard and structured (bones, teeth, but also growths, polyps, stones, tumors, etc.).

Heat and body fluids are governed by Yellow Bile and Phlegm respectively. When there are no further specifications, the terms “heat” and “fluids” can be used, in this text, to indicate the corresponding humor.

The functioning of the whole body is governed by the mixing (*crasia*) of such humors: if the ratio between the humors is proper (we speak of *eucrasia*), the body functions at its best and the health is guaranteed; if they are blended improperly (we speak of *discrasia*), illness results.

A humor is defined *correct* when both its “quantity” and its “quality” are proper; when it prevails over the others, generating *dyscrasia*, it is said that it is *superabundant*, and when its quality is not appropriate it is said that it is *corrupt*. We say in general that a humor is *perverse* when it is overabundant or corrupt. In this text, in order to facilitate comparisons between different systems of medicine, we resort to an extension with respect to the classical conception and define a humor as “perverse”:

- when its “quantity” is not optimal, that is, it is excessive (superabundant humor) or deficient (deficient humor) with respect to the condition of *eucrasia* (the classical theory allows only excess; deficiency is due to the prevalence of another humor with opposite qualities), or
- when its “quality” is different from the physiologically appropriate one (corrupt humor)²⁰.

An excess of heat in the body can overheat and “cook” the humors, altering their characteristics. Phlegm thickens and becomes more viscous, giving rise to the so-called *thickened Phlegm*. If the excess heat is important or lasts for a long time, all humors can end up “burning” (in this case we call them *adust humors*). When burned, humors always produce *Melancholia*. Unani-Tibb medicine provides four types of perverse melancholia produced by the combustion of humors: *malankholia damvi*, produced by the combustion of Blood; *malankholia safravi*, produced by the combustion of Yellow Bile; *malankholia balghami*, produced by the combustion of Phlegm (generally due to fermentation) and *malankholia saudawi*, produced by the combustion of “correct” *Melancholia*.

Phlegm is cold in the first degree and damp in the second and is a mobile and flowing humor. When coldness becomes excessive, however, the Phlegm can thicken and become viscous (cold indeed makes viscous), producing once again *thickened Phlegm*.

Phlegm itself, when it accumulates and stagnates for any reason (for example due to a lack of heat or an excess of Tension, see below), generates, by “compression”, secondary heat that can condense the humor and make it viscous.

Furthermore, in nature stagnant dampness favors fermentation and putrefactive processes, especially when there is concomitant heat. Also in the human body an accumulation or stagnation of Phlegm may cause the onset of fermentation or putrefaction (phenomena that today’s medicine generically indicates as *infections*), which are certainly supported by the natural heat of

²⁰ *Melancholia*, for example, can be in excess with respect to the physiological condition of *eucrasia* (generating excessive structures) or in deficit (generating deficient constructions), but it can also be generated by the combustion of humors by heat (see below); in the latter case, it is always perverse (therefore it is perverse in quality rather than in quantity). In classical humoral medicine these three conditions are usually not so sharply distinguished from each other.

the body and by any secondary heat generated by compression of the Phlegm. Moreover, the fermentation and putrefaction generate further secondary heat²¹. All these phenomena are characterized by the coexistence of perverse dampness and heat, even if, to be more precise, they should be described as due to the presence of pathological dampness associated with a certain degree of perverse heat (it is therefore more correct to think of them as due to “heated” humidity rather than moist heat). From a clinical point of view, the disorders characterized by this humoral picture include the phenomena known as *putrefaction*²² which are manifested by the emission or collection of purulent material, often even hardened (e.g., abscesses)²³.

The conditions described so far (thickened phlegm, adust humors, putrefaction) are perverse not due to an incorrect quantity of the humors, but because of their “bad” quality.

Tension

In this text, for the exclusive purpose of simplifying any comparisons between different systems of medicine (for example, Chinese and humoral), we add the pseudo-humor *Tension*²⁴, which is responsible for the “functionality” of the whole body or its parts (e.g., the organs). In this sense, it corresponds to the *Qi* of Chinese medicine but also to other concepts, such as that of the *Four Virtues* (attractive, retentive, alterative and expulsive) of organs according to Galen (see for example [Giannelli]) and it can also be related to the *vasoconstriction* and *vasorelaxation* conditions of Physiomedicalism and to Matthew Wood’s *Constriction* and *Relaxation* tissue states [Wood].

Tension, defined as a *pseudo*-humor because it is not contemplated by the classical humoral theory, can be thought of as formally derived from Fire to which a sort of “constraint”, “limitation”, or “obstacle” has been applied. Like Fire, in fact, it is a form of “energy”, mobile in itself and activating; but whereas Fire tends to move only upwards and centrifugally, thus expanding indefinitely, the movement of Tension is more “structured” and so to speak “oriented” towards specific, defined forms and modalities. We can therefore see it as a kind of Fire to which a structuration (element of “terrestrial” nature) has been applied.

We can resort to an image taken from everyday life as an example. If we pour water on the fire, the latter goes out and the water disperses or evaporates. If we place a hard (i.e., cold and dry) element above the fire (for example, a terracotta or metal container) which prevents the water to directly “mix” with the fire, we are able to let the water heat up without dispersing, and to use it warm for specific purposes (for example, to cook food). By applying a cold and dry “obstacle” (the container) to the fire, we “functionalize” the heat that otherwise would disperse or make the water disperse or evaporate.

Tension can therefore be described, in a humoral sense, as derived from a sort of “functionalization” of Fire by a factor (a principle rather than a material cause) of a cold and dry nature. For this reason Tension is hot and dry, with a lower degree of heat than Fire (because of the cooling due to functionalization).

21 The fermentation and putrefaction processes are generally exothermic or generate a “hot” response from the human body.

22 Corresponding to the *toxic heat* of Chinese medicine. This condition also includes diseases characterized by macular or maculopapular eruptions (e.g., exanthematous diseases).

23 The conditions known as *Dampness/Heat* in Chinese medicine (which include, for example, problems often related to the urinary tract or gallbladder, some cases of jaundice, etc.) also fall within this picture.

24 Name borrowed from Matthew Wood’s tissue states model [Wood].

Even Tension can be correct or perverse and, in the latter case, it can be perverse both in quantity (excess or deficit of Tension) and in quality (think for example of the *Qi ni*, or *counterflow Qi*, of Chinese medicine). Given the correspondence, described above, of Tension with Qi, the various manifestations of perverse Tension will typically have a more or less specific correspondence in Chinese medicine (for example, “Tension deficiency” corresponds to “Qi deficiency”). In general, Tension imbalances correspond to Qi imbalances and/or to “Wind” (intended as a pathogenic manifestation).

An imbalance in Tension can also affect other humors, potentially making them perverse. For example, an excess or a stasis (stagnation) of Tension can prevent the body fluids from being moved correctly, generating stagnation of Phlegm and/or Blood; Tension stagnation can generate “compression” which in turn can produce heat (Chinese medicine speaks, for example, of “implosion of stagnant Qi” which generates Fire, understood here not as the element but as a specific manifestation of heat).

REFERENCES

[AmDragon]	https://www.americandragon.com
[Blackwell]	Elizabeth Blackwell, " <i>A Curious Herbal</i> " (1737-39)
[Cloquet]	Hippolyte Cloquet, " <i>Faune des Médecins, Ou Histoire des Animaux et de leurs produits.</i> ", Imprimerie De Feugueray, tome IV, Paris (1823)
[Cochranelib]	https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004547.pub2/full
[Cook]	William Cook, " <i>The Physiomedical Dispensatory</i> " (1869)
[Culpeper]	Nicholas Culpeper, " <i>The Complete Herbal</i> " (1653)
[DewitLeunis]	Dewit, Leunis, " <i>Trattato Teorico e Pratico di Fitoterapia Ciclica</i> ", Nova Scripta Srl., Genova (2018)
[Durante]	Castore Durante, " <i>Herbario nuovo</i> " (1667)
[Felter]	Harvey Wickes Felter, John Uri Lloyd, " <i>King's American Dispensatory</i> " (1898)
[Gerard]	John Gerard, " <i>The Herball or Generall Historie of Plantes</i> ", London (1636)
[Grieve]	M. Grieve, " <i>A Modern Herbal</i> " (1931)
[Hill]	John Hill, " <i>The Family Herbal</i> " (1812)
[Jang]	Tae-Soo Jang et al., " <i>rDNA Loci Evolution in the Genus Glechoma (Lamiaceae)</i> ", PLoS ONE (2016) 11(11):e0167177. doi:10.1371/journal.pone.0167177
[Jang2]	Tae-Soo Jang et al., " <i>A systematic study of Glechoma L. (Lamiaceae) based on micromorphological characters and nuclear ribosomal ITS sequences</i> ", Korean J. Pl. Taxon. 44(1): 22-32 (2014); doi:10.11110/kjpt.2014.44.1.22
[Jansen]	Ton Jansen, " <i>Finding your Way through the Forest of Symptoms</i> " (2019)
[Jarić]	Snežana Jarić et al., " <i>An ethnobotanical study on the usage of wild medicinal herbs from Kopaonik Mountain (Central Serbia)</i> ", Journal of Ethnopharmacology 111 (2007), 160–175; doi:10.1016/j.jep.2006.11.007
[Kalbermatten]	Roger Kalbermatten, Hildegard Kalbermatten, " <i>Tinture madri vegetali – Essenza e impiego</i> ", AT Verlag (2015)
[Kress]	https://www.henriettes-herb.com/blog/hotw-ground-ivy.html (Retrieved: 2024-04-23)
[Kumarasamy]	Yashodharan Kumarasamy et al., " <i>Isolation, structure elucidation and biological activity of hederacine A and B, two unique alkaloids from Glechoma hederaceae</i> ", Tetrahedron 59 (2003) 6403–6407; doi: 10.1016/S0040-4020(03)01093-7
[Marković]	Marija Marković et al., " <i>The plants traditionally used for the treatment of respiratory infections in the Balkan Peninsula (Southeast Europe)</i> ", Lekovite Sirovine (2022), 42(1), 68–88; doi:10.5937/leksi2242068m
[Mattioli]	Pietro Andrea Mattioli, " <i>Discorsi di M. Pietro Andrea Mattioli sanese, medico cesareo, ne' sei libri di Pedacio Dioscoride Anazarbeo della materia Medicinale</i> " (1746)
[McDonald]	Jim McDonald, https://www.facebook.com/michiganherbalist/posts/10229051485084617 (Retrieved: 2024-05-23)
[Pelikan]	Wilhelm Pelikan, " <i>Le piante medicinali – per la cura delle malattie</i> ", Natura e Cultura editrice (1999); Orig.: " <i>Heilpflanzenkunde – Der Mensch und die Heilpflanzen</i> "
[Peroni]	Gabriele Peroni, " <i>Driope – ovvero il patto tra l'uomo e la natura</i> ", Nuova Ipsa Editore (2012)
[POWO]	Kew Royal Botanic Gardens, Plants of the World Online, https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:447338-1

[Réaumur]	René-Antoine Ferchault de Réaumur, " <i>Memoires pour servir a l'histoire des insectes</i> ", tome III, pag. 416 (1734)
[Remington]	P. Remington, Horatio C. Wood et al., " <i>The Dispensatory of the United States of America</i> " (1918)
[Rossi]	Massimo Rossi, " <i>Tinture Madri in fitoterapia</i> ", Studio Edizioni, Milano (1995)
[Quer]	Pío Font Quer, " <i>Plantas Medicinales – El Dioscóride Renovado</i> ", Ed. Península, Barcelona (2020)
[Salmon]	William Salmon, " <i>Botanologia</i> ", London (1710)
[Šarić-Kundalić]	Broza Šarić-Kundalić et al., " <i>Ethnobotanical study on medicinal use of wild and cultivated plants in middle, south and west Bosnia and Herzegovina</i> ", <i>Journal of Ethnopharmacology</i> 131 (2010) 33–55; doi:10.1016/j.jep.2010.05.061
[Scholten]	https://www.qjure.com
[Tobyn]	Graeme Tobyn, Alison Denham, Margaret Whitelegg, " <i>The Western Herbal Tradition</i> ", Churchill Livingstone, Elsevier (2011); ISBN: 978-0-443-10344-5
[Vermeulen]	Frans Vermeulen, Linda Johnston, " <i>PLANTS – Homeopathic and Medicinal Uses from a Botanical Family Perspective</i> ", Saltire Books (2011)[Vermeulen]
[Wanga]	Ya-Yu Wanga et al., " <i>Glechoma hederacea extracts attenuate cholestatic liver injury in a bile duct-ligated rat model</i> ", <i>Journal of Ethnopharmacology</i> 204 (2017) 58–66; doi: 10.1016/j.jep.2017.04.011
[Yang]	Liu Yang et al., " <i>The phytochemistry, pharmacology and traditional medicinal use of Glechomae Herba – a systematic review</i> ", <i>RSC Adv.</i> , 2021, 11, 19221–19237; doi: 10.1039/d1ra01366a
[Xiao]	Min Xiao, " <i>Protective effect of Glechoma hederacea extract against gallstone formation in rodent models</i> ", <i>BMC Complementary Medicine and Therapies</i> (2021) 21:199; doi: 10.1186/s12906-021-03368-1
[Zhou]	Ying Zhou et al., " <i>A review of plant characteristics, phytochemistry and bioactivities of the genus Glechoma</i> ", <i>Journal of Ethnopharmacology</i> 271 (2021) 113830; doi: 10.1016/j.jep.2021.113830