

# Achillea

**Botanical name** Achillea millefolium L.

**Family** Asteraceae (Compositae)

**Pharmaceutical name** Millefolii herba cum flore

**Part** dried aerial parts with flowers

**English** yarrow

**German** Schafgarbe

**French** millefeuille

**Mandarin** yáng shī cǎo (洋蓍草)

aerial parts of *A. millefolium* L.

Achillea is a fascinating herb. Study of Achillea can show how the use of a herb in the Roman armies of the emperor Nero has been continued down a line of tradition to the present day; how differences in the use of a herb can be linked to chemical differences relating to variation in chromosome number; and how Native American use can be related both to traditional Chinese medicine and to modern biochemistry.

**Use in the West** Yarrow has been used in Europe since at least the time of Dioscorides.<sup>1</sup>

As a doctor with the Roman army, he used it for healing wounds, an important use for soldiers, hence the old name *wound wort*. He wrote ‘pound the leaves and put them on a fresh wound to close and heal it, to clear heat and inflammation from the wound, and to congeal the blood.’

Dioscorides also used Achillea for dysentery, which until relatively recently, whether associated with cholera or other causes, killed as many soldiers as did steel and lead.

Yarrow now has one of the widest ranges of applications of any herb used in the West. It is used for disorders of the respiratory, digestive, hepatobiliary, cardiovascular, urinary, and reproductive systems. For example, it can be used as a:

- *diaphoretic and antipyretic* for the common cold, influenza, and fever
- *anticatarrhal* for sinusitis or sinus congestion with headache
- *bitter digestive tonic and cholagogue* for loss of appetite and biliary disorders
- *gastrointestinal anti-inflammatory and antispasmodic* for indigestion, epigastric distension, flatulence, and intestinal colic
- *antihypertensive* for hypertension and sequelae of CVA
- *diuretic and urinary antiseptic* for urinary retention or cystitis
- *emmenagogue* for amenorrhea or menstrual irregularities
- *astringent and antihemorrhagic* for urinary incontinence, diarrhea, menorrhagia, or leukorrhea
- *vulnerary and topical anti-inflammatory* for slow-healing wounds and skin inflammations

Yarrow is one of my favorite herbs. On mountain walks, I have found that chewing the freshly gathered leaves can reduce the dizziness of altitude sickness, allay the weakness of sunstroke and the effects of dehydration, and give increased endurance. The fresh leaves also seem to clear the mind and help concentration.

**Use in China** According to Perry,<sup>2</sup> the uses of *A. millefolium* seem to have originated in European folk medicine, with subsequent transfer to the East. The nature of the entry for yáng shī cǎo in the *Chinese Herbal Medicine Dictionary*<sup>3</sup> also gives this impression. It did not list the meridians entered, but it gave much information on chemical constituents and pharmacology.

### Species and subspecies

**Nomenclature** The name *Achillea millefolium* has been applied to a complex of barely distinguishable species or subspecies, which have evolved by polyploidy (changes in chromosome number). This has resulted in some confusion in nomenclature.<sup>4</sup> Unless otherwise stated, the name *Achillea* is used in this chapter to mean *A. millefolium*, without differentiation between the different subspecies (see discussion at the start of the section on *Research*).

**Chromosome number and chemical differences** What is interesting to the herbal practitioner is that differences in chromosome number between the *A. millefolium* subspecies are often accompanied by important chemical differences,<sup>5</sup> which, in their turn, may lead to differences in temperature, actions, and uses. This is discussed in this chapter:

- in the *Limitations* section under *Circulatory stimulant*
- in the *Research* section under *Constituents*
- in the *Traditional sources* section under *Temperature*

## What is special about *Achillea*

In terms of Chinese medicine, *Achillea millefolium*, as used in the West, can be said to be a warm-cool, acrid, and bitter herb that has its main effects on Lung, Spleen, Heart, and Uterus.

*The key to understanding *Achillea* is that it is a variable-temperature herb with a very wide range of potential actions and uses. This is associated with its unusually wide range of active constituents, including essential oils, sesquiterpene lactones, flavonoids, alkaloids, polyacetylenes, sterols, phenolic acids, coumarins, and tannins.*

### VARIABLE TEMPERATURE

*Achillea* can be said to have a range of potential temperature effects from cool to warm. Whether *Achillea* acts as cool, neutral, or warm in temperature can depend on the situation:

- *cool* diaphoretic and antipyretic for influenza or fever to clear Wind Heat
- *neutral* bitter digestive tonic for atonic digestion to tonify Spleen Qi
- *warm* diaphoretic and anticatarrhal for influenza with sinus headache and chills to clear Wind Cold Damp

The temperature effect manifested can also depend on the herbs with which *Achillea* is combined.

### CHINESE ACTIONS

In terms of Chinese medicine, *Achillea*, as used in the West, can be said to have three main actions:

- clear Exterior Wind
- tonify Deficiency
- clear Heart Phlegm

### WESTERN ACTIONS

*Achillea* can be said to have three main action groups, which are listed below and related to their corresponding Chinese action:

- *diaphoretic* clear Exterior Wind
- *tonic* tonify Deficiency
- *antihypertensive* clear Heart Phlegm

The individual actions included in each of the three main Western action groups are shown in the table below, and the leading action in each group has been italicized:

Chinese actions	Western actions
I. clear Exterior Wind	<i>diaphoretic</i> antipyretic anticatarrhal alterative
II. tonify Deficiency	<i>tonic</i> bitter digestive tonic astringent tonic emmenagogue
III. clear Heart Phlegm	<i>antihypertensive</i> antilipidemic antithrombotic circulatory stimulant

### ACTION GROUPS

*Achillea* is a good example of an herb with multiple actions in which the actions may work together in groups. Three Western action groups are discussed below.

**Diaphoretic** Whilst the diaphoretic action of *Achillea* may be primary, it is usually modified by one or more of the other actions of this herb, so that the actions work together as a group. The diaphoretic action may be modified by one or more of the following actions:

- antipyretic
- anticatarrhal
- alterative
- circulatory stimulant
- bitter digestive tonic

Examples of action pairs are given below, but in practice, three or more actions may be in simultaneous operation. In each example, the Chinese actions are linked to the corresponding Western actions.

*Diaphoretic + antipyretic* For example, Achillea can be used for influenza with fever. The diaphoretic action, increased sweating, can help to clear Wind Heat from the Exterior. The antipyretic action can help to clear Wind Heat from the Exterior and Excess Heat or Deficiency Heat from the Interior.

*Diaphoretic + antikatarrhal* For example, Achillea can be used for influenza with sinus congestion. The diaphoretic action can help to clear Wind Cold from the Exterior and the antikatarrhal action can help to clear Phlegm from the head and reduce sinus congestion and associated sinus headache.

*Diaphoretic + alterative* For example, Achillea can be used to treat recurring fever. The diaphoretic action can help to clear Wind from the Exterior, to treat the acute phase, and the alterative action can help to clear Retained Pathogen from the body surface, thus helping to prevent recurrence of the condition.

*Diaphoretic + circulatory stimulant* For example, Achillea can be used to treat influenza with poor circulation at the body surface. The diaphoretic action of Achillea to clear Wind Cold from the Exterior may be assisted by its capacity to dilate the peripheral arteries and increase blood flow to the surface. In Chinese terms, this can be described as moving Qi and Blood in the surface channels and vessels.

*Diaphoretic + bitter digestive tonic* For example, Achillea can be used to treat influenza with debility associated with digestive weakness. In this situation, Wind invasion may be facilitated by Deficiency of Defensive Qi. By acting as a bitter digestive tonic, Achillea may help to tonify Spleen Qi and also Defensive Qi, thus reducing Wind invasion. This can complement the diaphoretic action of clearing Exterior Wind.

**Tonic** Achillea can be said to have four aspects to its tonic action, which are shown below with their Chinese equivalents:

Western action	Chinese action
I. bitter digestive tonic	tonifies Spleen Deficient Qi
II. general tonic	tonifies Qi and Blood
III. immune system tonic	tonifies Defensive Qi
IV. convalescent tonic and antipyretic	tonifies Yin clears Deficiency Heat clears Retained Pathogen

*Digestive and general tonic* The bitter digestive tonic action of Achillea, which increases the efficiency of digestion and assimilation, may indirectly result in general tonic action. In Chinese medicine terms, tonifying the Spleen can lead to an increase in Qi and Blood.

*Immune system tonic* The general tonic action of Achillea, which strengthens Qi and Blood, can combine with its diaphoretic and circulatory stimulant actions at the surface of the body to strengthen the circulation of Defensive Qi. This reduces Wind invasion, leading to a reduction in the number of recurring respiratory infections.

*Convalescent tonic* The tonic, alterative, and antipyretic actions of Achillea can combine to treat recurring subacute fever or chronic feverishness and speed postfebrile recovery. Achillea can help to tonify Yin and clear Deficiency Heat associated with Deficient Yin. It can also help to clear Retained Pathogen, thus normalizing the circulation of Defensive Qi and assisting recovery.

**Antihypertensive** The following actions of Achillea may combine to normalize the function of the circulatory system and contribute to an overall antihypertensive effect:

- circulatory stimulant
- antikatarrhal and antilipidemic
- antithrombotic

*Circulatory stimulant* Achillea has a tradition of use to dilate the peripheral arteries, increase the flow of blood to the surface, 'equalize the circulation,' and thus help to lower blood pressure.

*Antikatarrhal and antilipidemic* These actions can combine to reduce excessive lipid levels in the blood and to reduce deposition of fatty material on the walls of the arteries. Reduction of atherosclerosis may assist treatment of hypertension. In terms of Chinese medicine, the antikatarrhal and antilipidemic actions can result in a reduction of Phlegm in the body and in the vessels. This can assist in the reduction of Heart Phlegm and improve circulation of Heart Blood.

*Antithrombotic* Formation of atheroma may limit blood circulation and predispose to thrombosis. Achillea may help to reduce thrombosis by reducing excessive blood lipids, and may help to treat associated hypertension.

## WESTERN USES

The Western uses of Achillea relate to its three main Chinese action groups:

Chinese actions	Western uses
I. clears Exterior Wind	colds, influenza, acute fever, recurring fever, low-grade fever, rhinitis, sinusitis, sinus headache, bronchitis
II. tonifies Deficiency	exhaustion, anemia, poor appetite, postfebrile debility, debility with night sweats, chronic fatigue syndrome, atonic amenorrhea, loose stools, atonic menorrhagia
III. clears Heart Phlegm	poor peripheral circulation, hypertension with atherosclerosis, sequelae of CVA

**Other uses** Achillea can have the following secondary actions and uses:

- antispasmodic for abdominal distension, intestinal colic, and flatulence
- anti-inflammatory for gastroenteritis
- cholagogue for biliary disorders
- diuretic and urinary anti-inflammatory for inflammation and catarrh of the urinary tract
- emmenagogue for amenorrhea or irregular menstruation
- astringent and antihemorrhagic for excessive sweating, diarrhea, menorrhagia, or leukorrhea
- vulnerary and topical for slow-healing wounds, skin inflammations, nosebleeds, varicose veins, hemorrhoids

## DIRECTION OF ENERGY

When taken as copious hot infusions, Achillea is an excellent example of a surface-active herb with an outward, diffusive, opening effect. However, when taken cold, other effects may become dominant, such as the tonic or diuretic actions, and the outward movement is reduced.

## TYPICAL CASE EXAMPLE

**Signs and symptoms** The patient has debility, poor appetite, poor peripheral circulation, frequent colds and influenza, which usually occur with sinus congestion and sinus headache. She also has recurring subacute febrile episodes and some night sweats, especially when she is particularly tired. She also tends to have amenorrhea.

The pulse is empty, especially at the superficial depth, and is also slippery and slightly wiry. The tongue is flabby, pale, and slightly purple, with a greasy white coat.

**Diagnosis** There is Deficient Qi, especially Deficient Defensive Qi, which allows for frequent Wind invasions. There is some Retained Pathogen, a slight amount of Deficient Yin,

and accumulation of Phlegm, with some Stagnation of Qi and Blood. A mix of Deficiency, Stagnation, and Phlegm Damp in the Uterus may be contributing to the amenorrhea.

**Choice of Achillea** This herb can clear Exterior Wind to treat the influenza, clear Phlegm to treat the sinusitis, clear Retained Pathogen to treat the recurring febrile episodes, tonify Spleen Qi to treat poor appetite and debility, tonify Defensive Qi to reduce the incidence of Wind invasion, and move Qi and Blood to treat the poor peripheral circulation.

## Limitations of Achillea

### TEMPERATURE

Although Achillea can be used for high fever, it is not a cold herb in the sense that it depresses the metabolism of the body. Therefore, its range has been classified in this book as warm-cool, rather than warm-cold. Also, it can be termed warm in the sense that it can help to clear Wind Cold from the surface, but it is not an herb that can rapidly increase body temperature, such as Capsicum or Zingiber.

### TASTE

The predominant taste properties of Achillea are acrid and bitter. This distinguishes Achillea from Berberis, for example, which is simply bitter, or from Rosmarinus, which is bitter, acrid, and aromatic.

**Acrid taste property** Achillea is an acrid herb to clear Pathogens from the Exterior, rather than an acrid herb to warm the Interior.

**Bitter taste property** Like Gentiana or Centaurium, Achillea can act as a bitter digestive tonic. However, it is not as effective a bitter anti-inflammatory for the digestive and hepatobiliary systems as Berberis or Hydrastis.

### ACTIONS

**Diaphoretic** Achillea is an excellent diaphoretic with a very wide range of complementary actions. However, for maximum diaphoretic effect, it should be taken as a hot infusion and combined with warmer diaphoretics, such as Zingiber.

**Antipyretic** Achillea cools the body by diaphoresis and by increasing peripheral circulation, rather than by sedation of metabolism. It is especially useful for fever accompanied by

Deficiency and Stagnation. For acute severe fever with Excess, a colder more sedative herb, such as *Asclepias*, may be preferred.

**Anticatarrhal** Achillea is specific for oversecretion of mucus by the membranes of the upper respiratory system as seen in acute or subacute cold or influenza. I do not consider Achillea as effective an anticatarrhal for the gastrointestinal, hepatobiliary, or urogenital systems as is *Hydrastis*.

**Alterative** The main alterative action of this herb is characteristically linked to its diaphoretic, and anticatarrhal actions. It is not an alterative in the sense that it is a strong cleanser of liver or kidneys, like *Taraxacum*.

**Digestive tonic** The bitter digestive tonic action of Achillea can be used to treat debility during convalescence, recurring febrile episodes with debility, and anorexia occurring with amenorrhea. However, *Gentiana* or *Artemisia* may be more effective for digestive and hepatobiliary weakness.

**Circulatory stimulant** The term *circulatory stimulant* is an approximation in the case of Achillea. This herb is not a hot acrid herb to warm the Interior like *Capsicum* or *Zingiber*. The effect of Achillea on peripheral circulation may be due to the combination of its diaphoretic, mild circulatory stimulant, antihypertensive, and alterative actions.

*Camphor and chromosome number* The strength of the warming circulatory stimulant action of Achillea may depend partly on the camphor content, and this may vary with the chromosome number of the subspecies. The hexaploid subspecies of Achillea can contain 0.2-1% essential oil, of which camphor can be 18%, whereas the tetraploid subspecies do not contain appreciable amounts of camphor.<sup>6</sup>

One of the reasons that *Rosmarinus* is a stronger warming circulatory stimulant than Achillea may be that *Rosmarinus* contains more camphor than Achillea: *Rosmarinus* has 1-2.5% essential oil, of which 15-25% can be camphor.<sup>7</sup>

**Astringent and hemostatic** Achillea has mild astringent properties and has been used as a vulnerary for bleeding wounds, fistulas, ulcers, diarrhea, leukorrhea, menorrhagia, melena, and epistaxis. I do not consider Achillea as effective as *Quercus* or *Potentilla*, or even *Geranium* or *Capsella*, and I would use it as a secondary astringent or hemostatic.

**Emmenagogue** I consider this to be a secondary action of Achillea. *Artemisia abrotanum* would be more effective both as a bitter tonic and as an emmenagogue for amenorrhea with anorexia and exhaustion.

**Antihypertensive** Achillea has not been reported to produce significant rapid reductions in blood pressure. Rather, it can be used long-term to assist gradual reduction of hypertension, especially when this is associated with atherosclerosis and thrombosis.

## Achillea paired with other herbs

Discussion of the limitations of each of the main actions of Achillea can be useful to clarify just what this herb can and cannot do. However, suitable combination with other herbs can extend the range of use of Achillea beyond its limitations as a single herb. The basic unit of herb combination is the herb pair. Twelve pairings of Achillea with other herbs are briefly explained below.

### CAUTION

*Before using any of the herb pairs below, it is important to be familiar with the cautions listed for each herb in the pair.*

#### **Achillea + Eupatorium perfoliatum**

*Influenza + myalgia*

Warm *Eupatorium* emphasizes the warming diaphoretic action of Achillea to clear Wind Cold. *Eupatorium* is specific for influenza with a deep aching sensation.

#### **Achillea + Salvia officinalis**

*Influenza + headache*

Achillea can treat headache via its diaphoretic and anticatarrhal actions. *Salvia* is specific for headache and for muscle ache at the surface of the body associated with a combination of Exterior Wind and nervous tension.

#### **Achillea + Angelica archangelica**

*Influenza + sinus congestion*

Warm, dry *Angelica* emphasizes the anticatarrhal diaphoretic action of Achillea to clear Wind Cold and Phlegm Damp from the head and sinuses.

*Caution* This pair is potentially drying and should be used with caution for patients with a tendency to dryness of the sinuses.

#### **Achillea + Mentha piperita**

*Influenza + sore throat*

Cool *Mentha* emphasizes the potential action of Achillea to clear Wind Heat and contributes its own specific anti-inflammatory effect on the throat. Therefore, this pair can be used to treat influenza with laryngitis.

**Achillea + Asclepias***Influenza + fever*

Cold Asclepias emphasizes the antipyretic action of Achillea and contributes expectorant, antispasmodic, and sedative actions. Therefore, this pair can treat acute pleurisy or bronchitis.

**Achillea + Echinacea***Recurring influenza*

Echinacea emphasizes the anticatarrhal, alterative, and diaphoretic actions of Achillea to clear Retained Heat and treat recurring respiratory infections. Also, both herbs can act as tonics to speed recovery after a fever or infection.

**Achillea + Pseudostellaria***Debility + low-grade febrile episodes*

Moist, sweet Pseudostellaria complements the bitter digestive tonic action of Achillea and moderates its slightly drying effect. Therefore, this pair can be used for postfebrile recovery.

**Achillea + Marrubium***Debility + digestive weakness*

Bitter Marrubium emphasizes the bitter digestive tonic action of Achillea and directs Achillea to the Lungs where the expectorant action of Marrubium adds to the anticatarrhal diaphoretic action of Achillea. This pair can be used for digestive and general weakness with bronchial phlegm.

**Achillea + Zanthoxylum***Debility + poor circulation*

Warm Zanthoxylum emphasizes the anticatarrhal, circulatory tonic, diaphoretic, and antirheumatic actions of Achillea. As a result, this pair can treat weak patients with rheumatism or arthritis and poor peripheral circulation.

**Achillea + Crataegus***Hypertension*

Crataegus can be said to direct Achillea to the heart and circulatory system, and emphasizes its antiatheromatic, anti-thrombotic, and antihypertensive actions. This pair can be used to treat cardiac weakness and exhaustion, poor circulation, labile blood pressure, hypertension, and the sequelae of CVA.

**Achillea + Artemisia spp.***Amenorrhea + debility*

The Artemisia species, especially *A. absinthium*, are aromatic bitter herbs that can indirectly tonify Blood by em-

phasizing the bitter digestive tonic action of Achillea. Artemisia can also strengthen the emmenagogue action of Achillea so that the pair can be used to treat amenorrhea with anemia.

**Achillea + Capsella***Menorrhagia + debility*

Capsella emphasizes the astringent and hemostatic actions of Achillea to reduce diarrhea or abnormal uterine bleeding. Achillea can help to treat debility by acting as a bitter digestive tonic.

## Achillea combinations

Six Achillea combinations are discussed below:

Combination	Chinese syndromes
1. influenza + sore throat	Wind Heat
2. influenza + sinusitis	Wind Cold Damp
3. recurring fever + exhaustion	Retained Pathogen + Liver Deficient Qi
4. recurring fever + respiratory infection	Retained Pathogen + Deficient Defensive Qi
5. amenorrhea + exhaustion	Deficient Blood and Qi
6. atherosclerosis + hypertension + cold extremities	Heart Phlegm Cold + Heart Stagnant Qi

### CAUTION

*Before using any of the combinations below, it is important to be familiar with the cautions listed for each herb in the combination.*

#### 1. Influenza + sore throat

*Wind Heat*

Herb	Daily dose	Temperature	Taste
Achillea	6 g	warm-cool	acid, bitter
Mentha pip.	3 g	warm-cool	acid, aromatic
Sambucus	3 g	cool	acid, sl. bitter

### GENERAL

This is one of the best-known infusions for acute colds or influenza associated with Wind Heat, and has been recommended by Grieve,<sup>8</sup> Christopher,<sup>9</sup> and the BHP.<sup>10</sup> Christopher used either *Sambucus nigra* or *S. canadensis*. In the context of a Wind Heat condition, the overall temperature is

cool. For cold conditions, Zingiber can be added. This is an acrid combination to clear Exterior Wind with secondary bitter and aromatic properties to normalize digestion.

USE

- acute cold or influenza
- acute influenza with sore throat
- influenza with acute rhinitis

PRACTICAL NOTES

The amount of herbs given in the table is enough to make about 3 cups of infusion (see the chapter on *Dose*). The herbs are steeped in boiling water for about 10-15 minutes, then strained and drunk warm. The hot infusion is given in large amounts, for example, 0.5-1 cup, every 0.5-2 hours, until the patient is perspiring freely. The patient should be well wrapped in warm clothes and in bed. If more than 3 cups of this tea are required in a single day—and this is quite common—more infusion can be made.

This combination should break the cold or influenza within 1-2 days. If it does not, then a different combination or treatment is required. This combination is for short-term use only, during the acute phase.

*Caution* Patients should be warned that, once they are perspiring freely, they should keep warm and avoid exposure to cold and wind, or the condition may be worsened.

2. Influenza + sinusitis

*Wind Cold Damp*

Herb	Daily dose	Temperature	Taste
Achillea	3 g	warm-cool	acrid, bitter
Angelica arc.	3 g	warm	bitter, acrid, aromatic
Sambucus	3 g	cool	acrid, sl. bitter
Euphrasia	3 g	neutral-cool	acrid, sour, bitter
Zingiber	3 slices	hot	acrid, aromatic

GENERAL

This combination can be used as a strong infusion for Wind Cold invasion with Phlegm Damp. It is a warm combination that can be used for Wind Cold patterns. For Wind Heat patterns, Angelica and Zingiber can be removed and Echinacea added. This is a combination that is acrid both in the sense of clearing Exterior Wind and in the sense of warming the Interior.

USE

- acute influenza with sinus congestion and headache

- acute bronchitis with sinusitis

PRACTICAL NOTES

The amount of herbs given in the table is enough to make about 3 cups of infusion (see the chapter on *Dose*). The herbs are steeped in boiling water for about 10-15 minutes, then strained and drunk warm. The hot infusion is given in large amounts, for example, 0.5-1 cup may be given every 0.5-2 hours until the patient is perspiring freely and there is relief of sinus congestion and headache. The patient should be well wrapped in warm clothes and in bed. If more than 3 cups of this tea are required on the first day, more infusion can be made.

Once the symptoms improve, half a cup can be taken three times per day for up to 3 days. After 3 days, it may be appropriate to change to a less diaphoretic combination.

*Caution* Patients should be warned that, once they are perspiring freely, they should keep warm and avoid exposure to cold and wind, or the condition may be worsened.

3. Recurring fever + exhaustion

*Retained Pathogen + Liver Deficient Qi*

Herb	Ratio	Temperature	Taste
Achillea	1	warm-cool	acrid, bitter
Artemisia abs.	1	warm-cool	bitter, aromatic
Gentiana	1	neutral-cool	bitter
Berberis	1	cool	bitter
Pseudostellaria	1	neutral	sweet, sl. bitter
Glycyrrhiza	0.5	neutral-cool	sweet
Zingiber	0.5	hot	acrid, aromatic

GENERAL

This combination is for Retained Pathogen associated with Liver Deficient Qi. The combination treats recurring fever with exhaustion associated with weakness of liver function and the inability of the liver to complete detoxification. The overall temperature of the combination is neutral to treat warm, neutral, cool, or mixed conditions. The acrid property assists clearance of Retained Pathogen at the surface, the bitter property assists strengthening of the Liver to assist in the detoxification, and the sweet property has a tonic function.

USE

- recurring febrile episodes with exhaustion following a disease such as malaria, drug abuse, or prolonged multimedication

- exhaustion with recurring infections as in some patterns of chronic fatigue syndrome
- exhaustion with gastrointestinal and hepatobiliary weakness after a fever

#### PRACTICAL NOTES

This combination can be taken as 2.5-5 ml of 1:5 tincture in quarter of a cup of warm water, three times per day. It can be taken for 1-2 months, with appropriate breaks and modifications during the subacute or remission phase. During the acute phase, *Pseudostellaria* can temporarily be omitted from the combination.

#### 4. Recurring fever + respiratory infection

*Retained Pathogen + Deficient Defensive Qi*

Herb	Ratio	Temperature	Taste
Achillea	1	warm-cool	acid, bitter
Echinacea	1	cool	acid, bitter, sl. sweet
Thymus	1	warm-cool	aromatic
<i>Pseudostellaria</i>	1	neutral	sweet, sl. bitter
<i>Panax qui.</i>	0.5	neutral	sweet, sl. bitter
Glycyrrhiza	0.5	neutral-cool	sweet
Zingiber	0.5	hot	acid, aromatic

#### GENERAL

This combination is for patterns with a mixture of the following syndromes:

- Retained Pathogen
- Deficient Defensive Qi
- Deficient Lung Qi
- Deficient Kidney Qi
- Deficient Fluids

This is a more or less neutral-temperature combination, which can be used for neutral-warm conditions. The acid constituents help to clear Retained Pathogen from the surface, the sweet constituents tonify Defensive Qi, Lung, and Kidney, and the bitter constituents help to strengthen digestion.

This combination is especially useful for postfebrile exhaustion or the remission phase of recurring fever when these conditions are associated with Deficient Qi and Fluids. For recurring respiratory infections turning into lingering bronchitis, *Thymus: recurring respiratory infection* would be a more appropriate combination. For postfebrile exhaustion with digestive weakness, *Cinchona: digestive weakness + post-febrile exhaustion* would be more suitable.

#### USE

During the subacute or remission phase for:

- recurring low-grade fever and respiratory infections with exhaustion as seen in some patterns of chronic fatigue syndrome, fibromyalgia, or HIV
- postfebrile exhaustion

#### PRACTICAL NOTES

This combination can be taken as 5 ml of 1:5 tincture in quarter of a cup of warm water, three times per day. It can be taken for 1-2 months, with appropriate breaks and modifications *during the subacute or remission phase*. During the acute phase, Glycyrrhiza can be omitted from the combination and the proportion of *Pseudostellaria* reduced to 0.5. Alternatively, a combination for Wind invasion, such as a modification of *Achillea: influenza + sore throat*, may be more appropriate, depending on the diagnosis.

#### 5. Amenorrhea + exhaustion

*Deficient Blood and Qi*

Herb	Ratio	Temperature	Taste
Achillea	1	warm-cool	acid, bitter
Artemisia abs.	1	warm-cool	aromatic, bitter
Ruta	1	warm-cool	bitter, aromatic
Leonurus	1	neutral	sour, sl. bitter
Angelica sin.	1	warm	sweet, aromatic, bitter
Gentiana	1	neutral-cool	bitter
Zingiber	1	hot	acid, aromatic

#### GENERAL

This combination is for Deficient Spleen, Deficient Qi and Blood, and Deficient and Stagnant Qi and Blood of the Uterus, with some Disturbance of Spirit. It is a neutral combination, which can be used for warm, neutral, or cool conditions. It is a bitter and aromatic combination in which the bitter taste is associated with tonification of the digestive and circulatory systems, and the aromatic property contributes to the moving and relaxing effects.

#### USE

- amenorrhea with anorexia, atonic digestion, and anemia
- amenorrhea with debility and nervous tension

#### PRACTICAL NOTES

Although this combination can be taken as an infusion, it is most conveniently taken as 5 ml of 1:5 tincture in quarter of a cup of warm water, three times per day. The combination can be used, with appropriate breaks and modifications, for up to 2 months.



## 6. Atherosclerosis + hypertension + cold extremities

*Heart Phlegm Cold + Heart Stagnant Qi*

Herb	Ratio	Temperature	Taste
Achillea	1	warm-cool	acid, bitter
Crataegus	1	sl. warm	sour, sweet
Salvia mil.	1	cool	bitter
Angelica sin.	1	warm	sweet, aromatic, bitter
Zanthoxylum (bark)	1	hot	acid, aromatic, bitter
Commiphora	1	warm	acid, bitter
Zingiber	0.5	hot	acid, aromatic
Capsicum	5-20 drops	hot	acid

### GENERAL

This combination is for Heart Stagnant Qi and Blood with Phlegm and Cold obstructing the channels and vessels of the Heart and body. It is a hot combination for cold or cool conditions. The acid and aromatic properties are important to warm and move Qi and Blood and to clear Cold and Phlegm from the channels; they are assisted by individual constituents in Commiphora, Crataegus, and Salvia.

### USE

- tendency to atherosclerosis with hypertension
- chest pain from heart disease with cold extremities

### PRACTICAL NOTES

This combination can be taken as 2.5-5 ml of 1:5 tincture in quarter of a cup of warm water, three times per day. The Capsicum is given in a separate bottle so that the requisite number of drops of Capsicum can be added to each dose of the main medicine. It can be taken, with appropriate breaks and modifications, for 1-2 months, providing the patient is monitored for any adverse reactions to Capsicum and for any adverse increase in symptoms of heat.

## COMPARISON OF THE SIX ACHILLEA COMBINATIONS

### 1. Influenza + sore throat

*Wind Heat*

Herb	Daily Dose
Achillea	6 g
Mentha pip.	3 g
Sambucus	3 g

### 2. Influenza + sinusitis

*Wind Cold Damp*

Herb	Daily Dose
Achillea	3 g
Angelica arc.	3 g
Sambucus	3 g
Euphrasia	3 g
Zingiber	3 slices

1. This infusion is an excellent general diaphoretic, antipyretic, and anticatarrhal combination. Achillea is the primary herb and the strongest diaphoretic and antipyretic of the three. Sambucus emphasizes the anticatarrhal action of Achillea and directs its action toward the sinuses. Mentha has an anti-inflammatory action on the throat and a carminative action on the digestive system. Also, both Achillea and Mentha can assist the liver function in order to speed recovery.

2. Combination No. 2 differs from combination No. 1 by being specifically directed to the sinuses and head. Also, the previous combination is especially for Wind Heat, whilst the warming and drying herbs Angelica and Zingiber make this combination more for sinusitis with Wind Cold, Damp, and Phlegm. Achillea, Euphrasia, and Sambucus also help to clear Phlegm from the head and sinuses.

### 3. Recurring fever + exhaustion

*Retained Pathogen + Liver Deficient Qi*

Herb	Ratio
Achillea	1
Artemisia abs.	1
Gentiana	1
Berberis	1
Pseudostellaria	1
Glycyrrhiza	0.5
Zingiber	0.5

### 4. Recurring fever + respiratory infection

*Retained Pathogen + Deficient Defensive Qi*

Herb	Ratio
Achillea	1
Echinacea	1
Thymus	1
Pseudostellaria	1
Panax qui.	0.5
Glycyrrhiza	0.5
Zingiber	0.5

3. Artemisia, Gentiana, and Berberis, assisted and moderated by Zingiber and Glycyrrhiza, can tonify and move Liver Qi, clear accumulation of Liver Heat and Liver Damp Heat, and help to clear Heat Toxins and Retained Pathogen from the body. Achillea and Zingiber can help to clear Retained Pathogen from the body surface, and, with Pseudostellaria and Glycyrrhiza, can help to strengthen the energy of the body and thus of the body surface.

4. Combination No. 3 focuses on clearing Retained Pathogen by strengthening the Liver, whilst combination No. 4 focuses primarily on tonifying Deficiency of the Lung and Kidney. Achillea, Echinacea, Thymus, and Zingiber are included to clear Retained Pathogen from the surface, to clear Lung Phlegm and to tonify the Lung. The sweet herbs Pseudostellaria, Panax, and Glycyrrhiza, as a group, can tonify both Lung and Kidney Qi. Strengthening the Lung and Kidney can help to clear Pathogens from the surface and the Lung, thus, assisting in the recovery and reducing the incidence of both febrile episodes and infections.

**5. Amenorrhea + exhaustion***Deficient Blood and Qi*

Herb	Ratio
Achillea	1
Artemisia abs.	1
Ruta	1
Leonurus	1
Angelica sin.	1
Gentiana	1
Zingiber	1

**6. Atherosclerosis + hypertension + cold extremities***Heart Phlegm Cold + Heart Stagnant Qi*

Herb	Ratio
Achillea	1
Crataegus	1
Salvia mil.	1
Angelica sin.	1
Zanthoxylum (bark)	1
Commiphora	1
Zingiber	0.5
Capsicum	5-20 drops

5. Artemisia, Ruta, and Leonurus are the primary herbs in combination No. 5, which makes this combination specific for amenorrhea with exhaustion and nervous tension. Artemisia and Gentiana provide the main bitter tonic action, helping to treat anemia, supported by Achillea, which also has a secondary emmenagogue effect. The sweet, bitter, and aromatic constituents of Angelica sinensis may combine to strengthen the blood. Zingiber warms and moves Qi and Blood in the Uterus and directs other herbs to this system.

6. This combination lacks the emmenagogues Artemisia, Ruta, and Leonurus, present in combination No. 5. Instead it contains Salvia and Crataegus, which combine with Achillea to reduce formation of atheroma, the fatty degeneration of the inner coat of arteries, thus reducing cerebrovascular or cardiovascular incidents. Commiphora, Zanthoxylum, Zingiber, and Capsicum together can reduce the incidence of Phlegm obstruction of the channels and warm and move the Blood to improve peripheral circulation. Achillea, Crataegus, and Capsicum can combine to reduce hypertension.

**OTHER ACHILLEA COMBINATIONS**

- *Asclepias: acute respiratory disorders + fever*
- *Asclepias: influenza + fever*
- *Capsella: menorrhagia + anemia*
- *Crataegus: atherosclerosis + hypertension*
- *Hamamelis: varicose veins*
- *Salvia: excessive sweating + exhaustion*
- *Salvia: headache + myalgia*

**Research**

In taxonomy, the phrase *sensu lato* (s.l.) can mean interpretation of a species in the broad sense. The phrase *sensu stricto* (s.s.) can mean interpretation of a species in the narrow sense.<sup>11</sup>

The name Achillea L. s.l. refers to *A. millefolium* in the broad sense, without differentiation between the subspecies. The name *A. millefolium* L. s.s. refers to *A. millefolium* L. ssp. *millefolium*, which is the most widespread subspecies.

Research reported under the name 'A. millefolium' may refer to *A. millefolium* s.s. or it may refer to any number of other Achillea species which have been more recently and narrowly defined.<sup>4</sup>

**CONSTITUENTS**

The following constituents have been reported:

- essential oil
- sesquiterpene lactones
- flavonoids
- alkaloids
- tannins
- other

**Essential oil** Achillea can contain 0.2-1% essential oil, which may contain 0-50% chamazulene.<sup>12</sup> The percentage of chamazulene and the general composition of the essential oil fraction vary greatly with the chromosome number of the plant material.

**Hexaploid plants** The most common subspecies of Achillea is *A. millefolium* L. ssp. *millefolium*, which is hexaploid and has no chamazulene.<sup>13</sup> The main components of the essential oil of hexaploid plants are oxygenated monoterpenes, especially linalool (26%) and camphor (18%), with some borneol and 1,8-cineole.<sup>5</sup>

**Tetraploid plants** The main components of the essential oil of tetraploid plants are generally sesquiterpenes, mainly chamazulene (about 25%) and  $\beta$ -caryophyllene (11-22%).<sup>5</sup> Tetraploids may also contain monoterpenoids such as  $\beta$ -pinene (23%) and  $\alpha$ -pinene (5%).<sup>14</sup> Usually, only tetraploid plants contain chamazulene.<sup>15</sup>

**Sesquiterpene lactones** The guaianolide sesquiterpene achillicin (8-acetoxyartabsin) is considered to be the main pro-chamazulene.<sup>16</sup> Matricin is sometimes cited in the literature, but has not been found.<sup>17</sup>

**Flavonoids** *A. millefolium* may contain apigenin and luteolin and their glucosides.<sup>18</sup> *A. pannonica* has been reported to contain rutin and glucosides of apigenin, luteolin, and acacetin.<sup>19</sup>

**Alkaloids** Achillea can contain a range of alkaloids and other bases, mainly achilleine (betonicine or L-4-hydroxystachydrine) as well as stachydrine, betaine, and choline.<sup>20</sup>

**Tannins** Achillea can contain 3-4% tannins.<sup>21</sup>

**Other** Achillea also contains polyacetylenes, triterpenes, sterols (including  $\beta$ -sitosterol), coumarins, and phenolic acids (including salicylic and caffeic acids).<sup>21</sup> Wichtl also listed the cyanogenic glycoside prunasin.

## PHARMACOLOGICAL AND CLINICAL RESEARCH

The following effects have been reported:

- antibacterial and antifungal
- anti-inflammatory
- antispasmodic
- antihypertensive and antilipidemic
- choloretic
- astringent and hemostatic
- antitumor
- antispermatogenic

**Antibacterial and antifungal** Extracts of *A. millefolium* have demonstrated antimicrobial activity against a range of bacteria.<sup>22</sup> Essential oil from *A. fragrantissima* was found to have inhibitory effect on various bacteria and *Candida albicans*.<sup>23</sup> Linalool, found at up to 26% of the essential oil fraction in hexaploids, which are the most common subspecies of *A. millefolium*, has been shown to inhibit 17 types of bacteria and 10 fungi.<sup>24</sup> Extract of *A. atrata* subsp. *multifida* was shown to inhibit *Candida albicans* and *Bacillus subtilis* in vitro. Some flavones isolated from this plant were shown to inhibit *C. albicans*, whilst other flavones inhibited *B. subtilis* as well.<sup>25</sup>

**Anti-inflammatory** Chamazulenes and prochamazulenes have demonstrated anti-inflammatory activity.<sup>26</sup> Sesquiterpene lactones from *A. setacea*, rupicolin B and 11,13-dehydrodeacetylmatricarin, have shown anti-inflammatory activity.<sup>27</sup>

According to Wichtl,<sup>17</sup> the  $\alpha$ -methylene- $\gamma$ -lactone group is essential for the anti-inflammatory activity of the sesquiterpene lactones.

Topical administration of a preparation of *A. millefolium* has demonstrated anti-inflammatory activity in rodents, attributed to a protein-carbohydrate complex.<sup>26</sup> A study using rats demonstrated anti-inflammatory activity of an *A. santolina* ethanol extract.<sup>28</sup> In a study using mice, it was found that the chloroform extract of *A. ageratum*, and also of its components stigmaterol and  $\beta$ -sitosterol, had topical anti-inflammatory effect, more in the acute than in the chronic phase.<sup>29</sup>

**Antispasmodic** Antispasmodic action may be due to flavonoids,<sup>4</sup> including apigenin.<sup>26</sup> Cirsiliol, a flavone isolated from *A. fragrantissima*, can have a concentration-dependent relaxing effect on isolated rat ileum.<sup>30</sup>

**Antihypertensive and antilipidemic** A recent double-blind placebo-controlled clinical trial using tincture of *A. wilhelmii* C. Koch demonstrated antihypertensive and antilipidemic effects. 15–20 drops twice daily of placebo or *A. wilhelmii* tincture were given to the patients for over 6 months. Within this time, there was a significant decrease in triglycerides, total cholesterol, and LDL cholesterol, and an increase in HDL cholesterol. A significant decrease was observed in diastolic and systolic blood pressure.<sup>31</sup>

The BHP<sup>32</sup> listed Achillea for thrombotic conditions with hypertension, including cerebral and coronary thromboses, but I have not yet seen research support for antithrombotic activity. Mabey<sup>33</sup> suggested that the flavonoids in *A. millefolium* may help to clear blood clots and also help to reduce blood pressure by dilating the peripheral arteries, that the alkaloid fraction may also lower blood pressure, and that the cyanogenic glycoside may slow the heart beat via the vagus nerve.

**Choloretic** The BHC stated that the bitter properties are due to the sesquiterpene lactones and the alkaloids. Choloretic activity has been demonstrated in animal experiments.<sup>34</sup>

**Astringent and hemostatic** The alkaloid achilleine has a hemostatic action.<sup>4</sup> The 3–4% tannins may also contribute to the astringent and hemostatic action (see discussion on tannins in the chapter on *Potentilla*).

**Antitumor** Three new sesquiterpenoids from *A. millefolium*, achimillic acids A, B and C, showed antitumor effect in mice.<sup>35</sup>

**Antispermatogenic** Extracts of *A. millefolium* showed antispermatogenic effect in mice.<sup>36</sup>

## RESEARCH VERIFICATION OF TRADITIONAL ACTIONS

The following traditional actions have been supported by research: bitter digestive tonic (choloretic effects), antihypertensive, and antihemorrhagic.

**Additional effects demonstrated by research** The following additional effects have been reported as discussed above: antibacterial, antifungal, anti-inflammatory, antilipidemic, antispasmodic, antitumor, and antispermatogenic effects.

## TOXICOLOGY

This is a generally safe herb. A rare instance of yarrow allergic contact dermatitis has been reported, which is thought to be due to the guaianolide peroxide,  $\alpha$ -peroxy-achifolide.<sup>37</sup>

Tisserand and Balacs<sup>38</sup> suggested caution in the oral use of the essential oil of the camphor chemotype of *Achillea*. However, since the essential oil constitutes only 0.2-1% of the dried herb, the camphor content may be unlikely to cause adverse effects in the infusion or tincture.

## Dose

**Dried herb** Both the BHP and the BHC recommended 2-4 g of dried herb, three times per day.

**Tincture** Both the BHP and the BHC recommended 2-4 ml of 1:5 tincture, three times per day.

**Initial dose** Can start at the standard dose.

**Duration** Generally suitable for long-term use, but large quantities of strong *Achillea* infusion are generally for acute conditions and for short-term use only.

## Cautions

These cautions apply to the infusion and the tincture. The use of the oil is outside the scope of this book.

**Western contraindications** The BHC mentioned a rare hypersensitivity to *Achillea* or to other members of the Compositae. Wichtl described this allergy as itching, inflammation, and formation of vesicles on the skin, in which case the intake of *Achillea* should be stopped. I have not yet seen this reaction.

**Chinese contraindications** No contraindications were given in the *Chinese Herbal Medicine Dictionary*. Although I have not seen this reported elsewhere, I have found that strong infusions of *Achillea* can have a drying effect in a few people in some situations, for example, in individuals with sinusitis accompanied by Lung Deficient Yin with Dryness.

**Pregnancy and lactation** No adverse reports.

**Side effects** Not reported.

**Overdose** No adverse reports.

**Interactions** No adverse reports.

## Regulatory status

Please read the *Regulatory status* section in the chapter on *Safety*.

*Achillea* (yarrow) is on the UK General Sale List, and it is not included in Part 4 of Schedule 4 of the Therapeutic

Goods Act Regulations of Australia. *Achillea* is not currently listed by the FDA (USA) as a prohibited substance, as subject to an import alert, or as a substance with a warning on its use.

## Traditional sources

### PROPERTIES

#### Temperature

*Variations of opinion* The *Chinese Herbal Medicine Dictionary* classified *Achillea millefolium* as cold, but this herb does not seem to have had a strong tradition of use in Chinese medicine. In Germany, Hildegard von Bingen<sup>39</sup> in the 12th century listed *Achillea* as slightly hot and dry. Tabernaemontanus listed it as drying and astringent and described it as having a temperate warmth with a cooling effect.<sup>40</sup> In England, Gerard<sup>41</sup> classified *Achillea* as 'meanly cold.' Culpeper<sup>42</sup> classified it as cold in the first degree and also considered it to be drying and binding.

*The variable temperature of Achillea* Tabernaemontanus may have been the first to notice the variable temperature of *Achillea* when he described it as having a temperate warmth with a cooling effect. In this book, *Achillea* is classified as warm-cool, because, in my experience, it can be used for influenza and acute sinus conditions associated with either Wind Heat or Wind Cold.

*Temperature and the needs of the body* Whether *Achillea* has a cooling, neutral, or even warming temperature effect may depend on the needs of the body. If there is a hot condition, this may evoke a cooling effect; if there is a neutral condition, neither a cooling nor warming effect may be evoked; whilst if there is a cool condition, this may evoke a warming effect.

According to Dr. Cole of Seattle,<sup>43</sup> when there is raised temperature, *Achillea* has a diaphoretic effect, but when there is no abnormal temperature, it has only a diuretic action. *Achillea* can have cooling antipyretic and anti-inflammatory actions, but according to Mills,<sup>44</sup> it does not have this cooling effect in nonfebrile states and may even help to increase the body temperature if it is low.

*Temperature and biochemistry* These different potential effects may be linked to different constituents. For example, the chamazulenes and pro-chamazulenes may be involved in a cooling effect and camphor may be involved in either cooling or warming effects, depending on the situation.

*Temperature and chromosome number* The differences of

opinion on the temperature of Achillea may also be linked to the differences in chemical composition of the different subspecies. For example, in hexaploids, potentially warming camphor can be 18% of the essential oil fraction, and cooling sesquiterpenes are found in relatively lesser amounts. Tetraploids have higher levels of sesquiterpenes and camphor is not listed as a main ingredient.<sup>5</sup> Therefore, if hexaploid material were used, the physician might conclude that Achillea was slightly warming, whilst if they had used tetraploid material, they might conclude it was slightly cooling.

### Taste

*Taste in the mouth* Yarrow is described in Wichtl as somewhat bitter and faintly aromatic. I find fresh yarrow to be strongly bitter, definitely acrid, and somewhat aromatic. I find that the intensity of the taste of yarrow is greater in plants from warm climates or alpine meadows with sunny exposure, and less in plants grown in places with little sun and heat, such as Seattle, USA.

The acrid taste may be due to the essential oils, and according to the BHC, the bitter taste is due to the sesquiterpene lactones and the alkaloids. The *Chinese Herbal Medicine Dictionary* classified Achillea millefolium as bitter and acrid in taste property, but that listing may be based on Western use, rather than Chinese tradition.

*Taste properties* Achillea millefolium, as used in the West, can be classified as acrid in the sense of clearing Exterior Wind from the surface of the body.

Tabernaemontanus said that it was the bitter taste that gives yarrow a temperate warmth with a cooling effect. This is a fascinating statement because it implies the multiple functions of the bitter taste property. The pharmacology section of the A. millefolium entry in the *Chinese Herbal Medicine Dictionary* stated that the bitter taste of this herb can tonify the stomach. This statement may be following Western concepts of the physiological effect of the bitter taste.

### ORGANS

In terms of Chinese medicine, Achillea, as used in the West, can be associated mainly with disorders of the following organs:

Organ	Examples of use	Source
Lung	colds hemoptysis respiratory catarrh colds and fever	Fox Kloss <sup>45</sup> Christopher BHP <sup>32</sup>

Organ	Examples of use	Source
Spleen	dyspepsia loss of appetite bitter tonic bitter aromatic for loss of appetite	Christopher BHC Weiss <sup>46</sup> Wichtl
Heart	thrombotic conditions with hypertension hypertension	BHP BHC

There is no information given in the Chinese Herbal Medical Dictionary for the meridians entered by A. millefolium (yáng shī cǎo).

### ACTIONS

Evidence from traditional sources for the following actions of Achillea is discussed below:

- diaphoretic and antipyretic
- anticatarrhal
- alterative
- bitter digestive tonic
- circulatory stimulant
- antihypertensive and antithrombotic
- astringent and antihemorrhagic
- emmenagogue
- diuretic
- antidiabetic

**Diaphoretic and antipyretic** Hildegard von Bingen recommended Achillea for fever, and Tabernaemontanus gave a combination of yarrow and sage for malaria. The Eclectic doctor William Fox, writing in 1878, listed Achillea as a diaphoretic and said that there is not a single herb that has done so much good. He said that for a cold, take a strong tea of yarrow and have a hot brick wrapped up in a vinegar cloth applied to the feet, to produce sweat and to remove the cold.<sup>47</sup>

In 1898, Felter and Lloyd<sup>48</sup> mentioned that the isolated component achilleine, from Achillea, had been used in Southern Europe as a substitute for quinine in the treatment of intermittent fever. Ellingwood listed Achillea for fever, and both Kloss and Christopher recommended Achillea for colds, influenza, fever, and eruptive diseases, such as measles, chicken pox, and smallpox. The BHP listed Achillea as a diaphoretic and antipyretic for fever and the common cold.

**Anticatarrhal** Ellingwood recommended Achillea for oversecretion by the mucous membranes due to atony or inflammation. Felter and Lloyd listed Achillea for leukorrhoea with profuse discharge due to atonic or inflamed vaginal mucous membranes, and both Kloss and Christopher listed it for mucous discharges from the bladder. Christopher rec-

commended Achillea for influenza, respiratory catarrh, and congestive headache. I have found that a hot infusion of Achillea can relieve influenza with sinus congestion and sinus headache, associated with the pattern of Wind Cold Damp invasion.

**Alterative** Both Kloss and Christopher listed Achillea as an alterative herb, and according to Christopher, it can purify the blood of waste material. Both Weiss and Wichtl listed Achillea as a bitter herb that can stimulate secretion of bile, and Christopher stated that it can regulate liver function.

However, its most powerful alterative action may be through the skin rather than the liver. Ellingwood stated that, in intermittent or bilious fever, Achillea can cause profuse sweating, which can discolor the bedclothes. Christopher also emphasized the use of copious hot infusions of Achillea to discharge impurities through the skin. I use it for conditions of recurring low-grade fever or for skin disorders or rheumatism when these disorders are associated with retention of toxins at the surface of the body, in the skin, muscles, or joints.

**Bitter digestive tonic** Tabernaemontanus prescribed a decoction of yarrow in wine for lack of appetite. He recommended that the patient drink a mug of the warm decoction every morning on an empty stomach. Lyle<sup>49</sup> described Achillea as a tonic for the appetite, digestive organs, and the general system. He recommended it in cold infusions as a tonic in convalescence from fever, from nervous prostration, and in phthisis (pulmonary tuberculosis) and night sweats.

Felter and Lloyd recommended Achillea for gastric and intestinal atony and for flatulence and spasms. Wichtl listed it as a bitter aromatic for loss of appetite and to stimulate the secretion of bile. He also listed it for gastrointestinal inflammation, diarrhea, flatulence, and colic. The German Commission E monograph listed Achillea for loss of appetite.<sup>50</sup>

**Circulatory stimulant** Lyle stated that Achillea in hot infusions can arouse capillary circulation, and Christopher stated that it can equalize the circulation. Mills noted that this herb can be used as a diffusive vasostimulant, and, according to Mabey, Achillea encourages blood flow to the skin, dilating the peripheral arteries and helping to lower blood pressure.

**Antihypertensive and antithrombotic** The BHP gave the specific indications for Achillea as thrombotic conditions with hypertension, whether the thromboses are cerebral or coronary in origin. Mabey listed Achillea for hypertension and for blood clots, and Mills noted its use for lowering moderately high blood pressure.

The antiatheromatic action of Achillea is not mentioned in the traditional texts. However, it seems reasonable to

ascribe this action to Achillea based on a combination of the anticatarrhal, antihypertensive, and antithrombotic actions, which were listed above, and an antilipidemic effect, which has been reported by recent research.<sup>31</sup>

### **Astringent and antihemorrhagic**

**Wounds and ulcers** Dioscorides prescribed pounded yarrow to put on a fresh wound to clear it from heat and inflammation and to congeal the blood. Lonicerus<sup>51</sup> gave Achillea wine for both internal and external wounds and injuries.

Hildegard von Bingen recommended Achillea for clearing putrid matter from ulcers and wounds, and Culpeper listed Achillea for inflamed wounds, moist ulcers, leukorrhea, and gonorrhoea. It seems that the drying astringent, antihemorrhagic, and vulnerary actions of Achillea are assisted in this by its anti-inflammatory, antimicrobial, and alterative actions.

**Diarrhea and dysentery** Dioscorides recommended yarrow decoction for dysentery. Tabernaemontanus gave a combination of yarrow and plantain as an enema for dysentery and listed yarrow powder in red wine for cramps due to dysentery or diarrhea.

Culpeper also recommended this herb for bloody dysentery, menorrhagia, and urinary incontinence. However, Felter and Lloyd stated that it can be used for various types of hemorrhage when the bleeding is small in amount. They listed Achillea for hemorrhoids with bloody or mucoid discharges. Kloss recommended it for diarrhea and dysentery and especially for diarrhea in infants.

**Hemoptysis** Tabernaemontanus prescribed yarrow with tormentil (that is, *Potentilla erecta*) for hemoptysis associated with pulmonary tuberculosis.

### **Emmenagogue**

**Menorrhagia and leukorrhea** Dioscorides said that yarrow can be made into a suppository with wool and put in the vagina to reduce excessive menstrual flow. Tabernaemontanus recommended yarrow decoction in wine for heavy menstrual flow and prescribed suppositories made from fresh yarrow for leukorrhea.

Culpeper listed Achillea as drying and binding and recommended it for menorrhagia and leukorrhea. Ellingwood listed Achillea for leukorrhea with profuse discharge from enfeebled mucus membranes.

**Amenorrhea and infertility** Felter and Lloyd listed Achillea for atonic amenorrhea. Christopher, BHP, and Mabey all listed Achillea for amenorrhea. In my opinion, this herb can be included in prescriptions for amenorrhea or infertility when there is Deficient Qi and Blood, and a possibility of obstruction of the channels of the Uterus by Phlegm.

**Diuretic** Whether Achillea acts as a urinary astringent or as a diuretic may depend on the needs of the patient.

*Achillea to reduce urination* Culpeper listed this herb for urinary incontinence, and Christopher recommended it for enuresis.

*Achillea to increase urination* Tabernaemontanus listed fresh yarrow juice and wine vinegar for urinary retention. Elingwood listed it for deficient renal action, Bright's disease, and edema, and Felter and Lloyd listed it for stranguary and urinary suppression. The BHP listed Achillea as a diuretic and urinary antiseptic.

The tannins may be involved in the urinary astringent action, and the essential oils may be involved in the diuretic action. The asparagin listed by Mills as a possible diuretic component of Achillea is not mentioned by the BHC or by Wichtl as a component.

*Hematuria* Tabernaemontanus listed various Achillea combinations for blood in the urine.

*Urinary stones* Tabernaemontanus also prescribed various Achillea combinations for difficult urination with gravel or stones in the urinary tract.

**Antidiabetic** In an ethnobotanical survey in Israel, *A. fragrantissima* was found to be used for treatment of diabetes.<sup>52</sup>

## COMPARISON OF WESTERN AND CHINESE USE OF ACHILLEA

*A. millefolium* is a major herb in the Western tradition, but a minor one in Chinese medicine. The two traditions are compared under the following headings:

- diaphoretic and antipyretic
- anticatarrhal and alterative
- general tonic and bitter digestive tonic
- circulatory stimulant and antihypertensive
- astringent and antihemorrhagic
- emmenagogue

**Diaphoretic and antipyretic** Achillea is one of the most commonly used herbs in the West for common colds, influenza, and fever. It is not an important herb for these disorders in China, although one text cited in the Chinese Herbal Medical Dictionary listed *A. millefolium* to clear Wind and to promote sweating.

**Anticatarrhal and alterative** Achillea is an important herb in the West to treat catarrhal states of the respiratory system,

especially when associated with Wind invasion. This use is not listed in the Chinese Herbal Medical Dictionary. The alterative use of Achillea is more important in China, and *yáng shī cǎo* is said to clear Heat and Toxin and treat ulcers and boils.

**General tonic and bitter digestive tonic** The use of Achillea as a tonic is far more common in the West than in China. However, one text cited in the Chinese Herbal Medical Dictionary listed Achillea as a tonic, and another text listed it for Deficient Yin 'steaming bone syndrome.'

**Circulatory stimulant and antihypertensive** Although the Chinese Herbal Medical Dictionary listed Achillea as harmonizing the Blood, for example, for traumatic injuries, this herb is not commonly used in China for circulatory disorders.

**Astringent and antihemorrhagic** In the West, Achillea is frequently used as an astringent or antihemorrhagic for a wide range of disorders, including nosebleeds, bleeding hemorrhoids, diarrhea, leukorrhea, and menorrhagia. Achillea is listed as an astringent in the Chinese Herbal Medical Dictionary, for example for bleeding hemorrhoids, but it does not appear to be frequently used.

**Emmenagogue** Achillea is not used as a primary emmenagogue in recent Western tradition, but is commonly used as a secondary herb to treat a variety of women's disorders. *Yáng shī cǎo* is listed as a herb for irregular menstruation, but is not often seen in Chinese formulas for gynecological disorders.

## NATIVE AMERICAN USE OF ACHILLEA

Achillea has been widely used by the Native Americans, and it is interesting to classify some of these uses in terms of Chinese actions and to speculate on their basis in phytochemistry.

*Native American use and Chinese actions* In the table below, the data on Native American use comes from *Plants of the Pacific Northwest Coast* by Pojar and MacKinnon:<sup>53</sup>

*Native American use and phytochemistry* As part of ongoing studies on the herbal remedies of the Micmac and Malecite Indians, the sterols and triterpenes of Achillea were investigated.  $\beta$ -sitosterol was identified as the major sterol and  $\alpha$ -amyrin as the major triterpene of this plant. The authors suggested that the effectiveness of Achillea may be partly due to the presence of these compounds, since many sterols and triterpenes exhibit a wide range of pharmacological effects.<sup>54</sup>

## NATIVE AMERICAN USE

Chinese action	Example of use	Tribe(s)
clears Exterior Wind	colds	Klallam
clears Heat	colds and coughs measles	Nuu-chah-nulth Squamish
clears Phlegm	bronchitis	Nuxalk
clears Retained Heat	blood purifier	Cowichan
tonifiers and moves Spleen and Liver Qi	general tonic stomach tonic	Quinault Sqaxin
astringent, stops bleeding	styptic diarrhea sore throat gargle	Saanich Snohomish Tsimshian
regulates Uterus	childbirth	Ditidaht, Makah

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