



## Illuminated Herbalism Certification Program™

### Prickly ash (*Zanthoxylum americanum*)

#### Part of Plant Used

Bark, berries

#### Short Description/Overview:

Prickly ash is an aromatic perennial small, shrubby tree belonging the Rutaceae family and native to central and eastern US and Canada. Prickly ash belongs to the same family as citruses and Sichuan pepper. It can grow as tall as 10 meter high. Prickly ash bark has been traditionally used as medicine, in various types of preparation; it has been used in similar ways and for similar purposes as Sichuan pepper. *Zanthoxylum* has been traditionally used as an herb for aches and pains, particularly those that are brought about by aging, with cold and poor circulation. Prickly ash has especially been used for rheumatism and arthritis and it is for these kinds of chronic 'cold' conditions that it is still mostly used today. The Native American tribes also used prickly ash internally for aching joints and would also chew some of the inner bark to cure toothache – leading to one of the tree's popular names – toothache tree.

#### Brief Description of the Therapeutic Functions

Prickly ash has circulatory stimulant, anesthetic, alterative, carminative, diaphoretic, analgesic, anti-microbial, lymphatic stimulant, rubefacient, bitter digestive, hepatic, anti-rheumatic, antispasmodic properties. It has an affinity for the circulatory and osteoarticular systems and is efficient in addressing chronic conditions such as rheumatism and skin diseases. It promotes blood flow to the peripheral tissues and joints and it is used specifically for peripheral circulatory insufficiency associated with

rheumatic symptoms. It is also efficient in stimulating peripheral circulation, to support lymphatic drainage, and to relieve edema. Prickly ash bark relieves gastralgia (stomach pain) and dyspepsia caused by coldness and vomiting, and stops diarrhea. It is excellent as a warming agent and to relieve cold and chills sensations, especially during fevers. It is efficient in numerous skin conditions related to poor circulation and drainage.

### **List of Specific Therapeutic Actions**

Osteoarticular / Musculoskeletal: aids in gout, relieves osteoarthritis, helps in rheumatoid arthritis, relieves muscle pain, stimulate peripheral circulation, supports sprains healing, soothes muscle spasms

Cardiovascular: stimulates peripheral circulation, tonic, favors lymphatic drainage, supports a healthy cardiovascular function

Digestive: soothes stomach pain, relieves gas and bloating, treats indigestion and dyspepsia, stimulates bile production, hepatoprotective

Respiratory: relieves toothaches, soothes laryngitis, relieves pharyngitis clears airways, aids expectoration, adjuvant in colds and flu,

Topical: improves skin conditions related to poor circulation

Immune: anti-inflammatory, anti-algic, anti-pyretic, antibacterial, antifungal, antiviral  
antibacterial

### **Native American:**

Various uses included using strong tea of prickly ash for topical applications to give the legs strength, and taken internally for relief from the pain of rheumatism, joint stiffness, muscle paralysis or low back pain.

### **Traditional Chinese Medicine (TCM):**

According to the principles of traditional Chinese medicine, prickly ash has pungent and hot properties. It favors the spleen, stomach and kidney meridians. It warms the spleen and stomach, and relieves pain. Prickly ash bark is often used to treat stomach pain, eczema and skin rashes, and to fight parasites such as roundworms and tapeworms. It can be taken both internally and externally.

### **Important Scientific Data:**

Prickly ash is rich in phytochemicals such as essential oils, fat, sugar, gum, alkaloids such as fagarine, magnoflorine, laurifoline, nitidine, chelerythrine,

as well as tannins, coumarins and xanthoxylins, and the alkylamide neohesperidin.

The alkaloid chelerythrine is the main responsible for its anti-inflammatory, anti-microbial properties and also potentiates analgesic effects of morphine. Chelerythrine also interacts with Na/K<sup>+</sup> ATPases and inhibits some hepatic enzymes.

Prickly ash has shown analgesic (pain relieving) and diaphoretic (sweat inducing) properties as well as promoting saliva.

In another study prickly ash exhibited antifungal and antimicrobial actions including against multi-drug resistant methicillin-resistant *Staphylococcus aureus* (MDR-MRSA).

Prickly ash aqueous preparation was shown to significantly reduce swelling and improve blood flow in experimental models of varicose veins and hemorrhoids.

Physiologically, prickly ash acts upon the secretions, the nervous and circulatory systems.

It has sialagogue (boosts salivation and mucus production). In the stomach it is warming and increases the digestive secretion (including biliary and pancreatic) as well as it supports the digestive transit. It also boosts the kidney activity, and increases urinary output. results. Cardiac action is increased, the pulse becomes slightly accelerated.

Recent research shows prickly ash to have strong anti-oxidant and anti-cancer properties.

### **Therapeutic Recipes:**

- For arthritic pain in formulation with cramp bark and white willow bark
- For joint pain and tendinitis in formulation with cayenne and turmeric
- For lymphatic drainage in formulation with red clover, plantain, licorice
- Alterative in formulation with buckthorn bark, burdock root, red clover flower, bladderwrack seaweed, licorice, Oregon grape root, poke root, turmeric, quassia:

**Dosage and Frequency:**

- Infusion:  $\frac{1}{2}$  tsp per cup hot water, 3x day
- Tincture:  $\frac{1}{4}$  -  $\frac{1}{2}$  tsp, 2 – 3x day

**Cautions, Warnings and Contraindications:**

*Caution:*

Cautious use is recommended in severe cases of chronic diseases.

*Warnings:*

Oral overdose can lead to mild stomach and intestinal irritation and nausea.  
Topical overdose can lead to mild local irritation.

*Contraindications:*

Pregnant or breastfeeding women, women with heavy menstrual flow and infants should avoid use.

**Possible herb / drug interactions:**

Prickly ash is considered generally safe when following normal dosages.  
However, association with anti-coagulants should be done under specialized supervision.