ABSTRACT
Pine and Juniper have much in common, yet each has areas of specialization. In this paper, the two are compared side by side for their healing properties.

Elle Dcoda

For Moonflower Herbfest
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Wherever Pine and Juniper grow around the world they have historically held center stage among indigenous cultures as towering figures of sacred medicine. Clues to their significance come to us from stories told by ancient cultures which were not (to our knowledge) in communication with each other. Historical texts add a bit more spice to our imaginations. Fortunately, most of us live among these trees and have the opportunity to discover their secrets directly. How are the similar to each other? How are they different?

We’re going to explore them side by side as we go through their constituents, history, uses of the different parts of these allies. I wish I could say that all species of Pinus and all species of Juniperus were the same, but they aren’t. I’ll make the comparison using just a few representative species and point out a few things to note about others.

For Pine we’ll look primarily at Scots Pine, *Pinus sylvestris* and Eastern White Pine (*Pinus strobus*). With Juniper, the Eastern Redcedar, *Juniperus virginiana*, and Common Juniper (*Juniperus communis*). Both Pinus and Juniperus spp. provide food and powerful medicine.

While we use almost all parts of the pine, our tour begins with the pine needles. For Juniper, the fully ripe (purplish) fruit is usually used. The fruit of juniper that has medicinal use is dark purple/blackish, and has 3 seeds. The leaves of pine are called needles but the leaves of juniper are called needle-like or scale-like, we’ll just call them leaves.

Several videos appear in this pdf. To view them, click on the graphic, your browser will load the video. There are also some screenshots from the Ultimate Herbal Database (when I refer to the database, this is the reference), only the headings are shown (the information panel is closed)

Let’s begin by looking at their energetic qualities & actions:

<table>
<thead>
<tr>
<th>Pine (needles)</th>
<th>Juniper (berries/cones)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A bit pungent, bitter and sweet,</td>
<td>a bit pungent and bitter</td>
</tr>
<tr>
<td>warm</td>
<td>neutral with warming and cooling potential</td>
</tr>
<tr>
<td>dry</td>
<td>dry/moist,</td>
</tr>
<tr>
<td>stimulating</td>
<td>stimulating</td>
</tr>
<tr>
<td>decongesting</td>
<td>restoring</td>
</tr>
<tr>
<td>softening</td>
<td>solidifying</td>
</tr>
<tr>
<td>dissolving</td>
<td>stabilizing</td>
</tr>
<tr>
<td>astringing</td>
<td></td>
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</tbody>
</table>

**Clues from our Ancestors**

In my classes I often make use of a memory technique called Loci, or the memory palace. Using stories with vivid imagery, we more easily recall details about a plant and its healing potentials. Loci goes back thousands of years and may well be responsible for some of the seemingly fanciful tales about plants that have circulated through the ages. A memorable Loci story is rich in outlandish detail. When we examine these tales with this in mind we gain some insight into traditional use. When we compare current medicinal research with these insights, confidence that we’re on the right track builds. Of course, the proof is in the pudding...when we apply what we’ve learned we stand on firm ground in our understanding.

**A Sacred Tree**

Recognition of tree spirit-power continues today. See Shamanic Prayer Tree. Burned as incense around the world, Pine and Juniper serve to purify the atmosphere, spirit, mind and to empower prayer.
Juniper:
Among Ojibwa various species of Juniperus were called “Common Juniper”. Eastern Redcedar stood out as “The Sacred Tree”, so it was regarded as having something special. In Osage creation myths Juniper is associated with the creation of the human race and called “The Tree of Life” (other cultures around the world refer to it the same way.)

The Hopi believe the spirit of the caretaker of Earth travels with the juniper tree. It’s thought that around Iceland and Norway, the juniper was the first tree to arrive after the ice age ended. It’s a pioneer tree, establishing ground for the forest dwellers to come. Some tribal legends tell of how “beings of power” …Thunderbirds…live in cedar forests.

Juniper was sacred to the Druids and in Wales, anyone who cut it down risked death.

Pine:
Beginning in ancient Greece and Rome, the Pine was recognized as a symbol of fertility. The pine was dedicated to several gods. In one legend Attis, a fertility deity, mutilated himself under a pine tree. Because his spirit entered the tree it was bled at the vernal equinox for turpentine until it was eventually cut down, adorned with ribbons and carried to a mother goddess’s sanctuary, where it was decorated with violets and fleeces. Later we see this belief about pine crop up in Scotland’s highlands, the high rate of illegitimate births was blamed on how many pine’s grew in the area. The pine cone was sacred to love goddesses, have you seen articles about how pine pollen increases testosterone…hence, male virility?

On the other hand, we find that during the Renaissance Juniper was as symbol of chastity.

The pine not only housed the soul of Attis but also the soul of the Celtic wizard, Merlin. He climbed a pine tree and never returned. it was considered a sacred tree to Merlin thereafter.

One of the beliefs shared by inhabitants of Japan and parts of Europe, shown to have merit by today’s scientific research, is that merely walking through a pine forest and inhaling their scent can cure emotional and mental problems…we call it Forest Bathing.

As a cure for emotional/mental problems, it makes sense that the Iroquois Confederacy buried their weapons under the “Great Pine of Peace”.

Want some supernatural powers? An ancient Taoist practice was to obtain them by living solely on pine needles!

Magic & Charms

Around the world, both Juniper and Pine have been used to clear negative influences, bad vibes. In this case, in addition to Juniper berries, it’s the branches of both genera with their leaves that are used.

**Pinus**

Pines were used for “transfer magic”, averting one’s pains and troubles to the tree itself (or its birds).

**Scotland**: it was called the **dreaming tree**, its needles were stuffed into a pillow so that a young woman could dream of her future husband.

**Great Britain area**: Gout cured by tying a knot in the upmost branch of a pine tree.

Break a pine branch while facing the setting sun to cure a fever

**Juniperus**

**Druids**: berries were used with thyme in Druid grove incenses for visions.

**Europe**: mature berries can be strung in the house to attract love

The Seminole used Juniper smoke as a fumigant to cure insanity.
Protection from Negative Influences

Today we recognize the powerful antimicrobial actions present in both trees, released into the air as smoke. These beliefs about protection could have developed as a result of an improved environment promoting health. One of the early practices still used today in the Alps was stuffing mattresses with pine needles to ward off vermin. Native Americans used them this way, as did other cultures around the world. How about a pine needle dog bed?

<table>
<thead>
<tr>
<th>Pinus spp. Branches/needles</th>
<th>Juniperus spp. Branches/leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Europe:</strong> If you wanted to protect your children from the evil eye, all you had to do was sweep their faces with pine boughs (ouch).</td>
<td><strong>Czechoslovakia:</strong> Juniper berries burned in stables to fumigate and drive out demons.</td>
</tr>
<tr>
<td>In Italian vineyards symbols of the pine were carved into posts to protect their grapevines from witchcraft and blight.</td>
<td><strong>Scottish Highlands:</strong> On New Year’s morning juniper was burned to purify dwellings and people.</td>
</tr>
<tr>
<td><strong>Scotland:</strong> if you could reach the highest cone on a tree and eat one of its kernels you were protected against fairies.</td>
<td><strong>Native Americans:</strong> Interior Salish and Northwest Coast tribes used juniper to banish evil spirits and protect themselves from witchcraft.</td>
</tr>
<tr>
<td><strong>Native Americans:</strong> it was well known among tribes that ghosts wouldn’t hang around the smoke of burning pine, so it was burned and ashes scattered in the hearths of homes where someone had died. If you did see someone you knew to be dead, a wash of pine (and more smoke) served as protection.</td>
<td>Southwestern Pueblos, junipers were believed to counteract ‘ghost sickness’</td>
</tr>
<tr>
<td></td>
<td><strong>Europe:</strong> a female spirit of the Juniper tree, called <em>Frau Wachholder</em> was invoked to make thieves return the goods they had stolen.</td>
</tr>
<tr>
<td></td>
<td><strong>Nepal/Tibet:</strong> Juniper is burned in a Puja ceremony for protection when climbing mountains, like Mt. Everest</td>
</tr>
<tr>
<td></td>
<td><strong>Biblical:</strong> In the Bible's Old Testament, a juniper tree with an angelic presence sheltered the prophet Elijah from Queen Jezebel's pursuit. Similarly, a later 6th century non-canonical apocryphal account tells of how the infant Jesus and his parents were hidden from King Herod's soldiers by a juniper during their flight into Egypt.</td>
</tr>
</tbody>
</table>

**The Pine Family**

**Pinaceae family**
Pine is the sole genus in the subfamily, Pinoideae
Pinus (genus)

Speaking of pine, we're referring to any of the 170 species of conifers in the genus, Pinus, found in the Pinaceae family. Only one species is native to the southern hemisphere. These trees can live over 1,000 years. The oldest one, located in California, is said to be over 4,500 years old.

Pines are gymnosperms. The genus is divided into three subgenera, which can be distinguished by cone, seed, and leaf characters:

- **Pinus subg. Pinus**, the yellow, or hard pine group, generally with harder wood and two or three needles per fascicle
- **Pinus subg. Ducampopinus**, the foxtail or pinyon group
- **Pinus subg. Strobus**, the white, or soft pine group, generally with softer wood and five needles per fascicle

A fascicle is a bundle of leaves or flowers growing crowded together.

Here in Arkansas the pine was made the official state tree in 1939. We have Shortleaf (*Pinus echinata*), Loblolly (*Pinus taeda*), Longleaf (*Pinus palustris*) and in the southern part of the state, Slash pine (*Pinus elliottii*).

The soft pines like the Eastern White Pine (*Pinus strobus*) are favored for food and medicine since they have a milder pitch and make foods and medicines that not only taste better but work quickly. All except the toxic Ponderosa, Norfolk Island, and the Yew (sometimes mistaken for Pine, but it's in a different family) are safe to experiment with. If you're working with a hard pine, you'll get turpentine flavored products (use in smaller doses) and as you'll discover, turpentine has merits of its own.
Eastern White Pine \textit{(Pinus strobus)}

Loblolly Pine \textit{(Pinus taeda)}
Shortleaf Pine, *Pinus echinata*

Scots (Scotch) Pine (*Pinus sylvestris*)
This one is valued for its medicinal properties. It was brought over from Europe as a Christmas tree (and escaped captivity).
The Cedar/Cypress Family

Junipers, member of the Cupressaceae family are often called cedars. **Junipers** are coniferous plants in the genus **Juniperus** of the cypress family Cupressaceae. Depending on taxonomic viewpoint, between 50 and 67 species of juniper are widely distributed throughout the Northern Hemisphere, from the Arctic, south to tropical Africa in the Old World, and to the mountains of Central America and Ziarat Pakistan. The highest-known Juniper forest occurs at altitude of 4,900 metres in south-eastern Tibet and the northern Himalayas, creating one of the highest tree-lines on earth.

Here’s a screenshot from the Ultimate Herbal Database of the genera commonly used in herbal medicine:

![Cupressaceae - Cypress or Cedar Family](image1)

And a screenshot of some of the key headings in the database under the Juniperus genus:

![Juniperus genus](image2)

They’re roughly divided into Old World species and New World species; the actual number of species is in dispute.

Wikipedia:

Many junipers (e.g. *J. virginiana*) have two types of leaves: seedlings and some twigs of older trees have needle-like leaves 5–25 mm (0.20–0.98 in) long; and the leaves on mature plants are (mostly) tiny (2–4 mm (0.079–0.157 in)), overlapping and scale-like. When juvenile foliage occurs on mature plants, it is most often found on shaded shoots, with adult foliage in full sunlight. Leaves on fast-growing 'whip' shoots are often intermediate between juvenile and adult.
In some species (e.g. *J. communis*, *J. squamata*), all the foliage is of the juvenile needle-like type, with no scale leaves. In some of these (e.g. *J. communis*), the needles are jointed at the base, in others (e.g. *J. squamata*), the needles merge smoothly with the stem, not jointed.

The needle-leaves of junipers are hard and sharp, making the juvenile foliage very prickly to handle. This can be a valuable identification feature in seedlings, as the otherwise very similar juvenile foliage of cypresses (*Cupressus*, *Chamaecyparis*) and other related genera is soft and not prickly.

**Eastern Redcedar (*Juniperus virginiana*)**
The lack of space between the words "red" and "cedar" indicate that this species is not a true cedar, *Cedrus*.

**Constituents**
These vary among different species so we can only speak in general terms of what’s most common among them. Pine pollen is a superfood covered later.

<table>
<thead>
<tr>
<th>Pine Needles (Scots Pine)</th>
<th>Juniper Berry</th>
</tr>
</thead>
<tbody>
<tr>
<td>essential oil (incl. monoterpenes up to 80% [incl. alpha &amp; beta pinenes, limonenes], monoterpenols [boreal 2%], 1,8-cineol, sylvestrene, bornyl acetate, cardimene, pumilone, phellandrenes, pinicrin), turpentine resin, OPCs (oligomeric proanthocyanins) Mallol Pinosylvin Catechin, galloatechin tannin, vitamin C vitamin A &amp; carotenoids vitamin k thiamine</td>
<td>essential oil up to 2% (incl. Terpenes, Alpha-pinene, beta-pinene, alpha-humulene, alpha-phellandrene, alpha-copaene, beta-phellandrene, alpha-terpinene, gamma-alpha-terpineol, alpha-thujene, geranyl acetate, borneol, cedrene, delta-cadinene, limonene, p-cymene, sabinene, eucalyptol, nerol, camphene, terpineol, cadinene., myricene, sabinene, myrcene, sesquiterpenes, cineol, cymene),</td>
</tr>
</tbody>
</table>
riboflavin
glucose,
galactose
coumaric acid
ferulic acid.

Flavor compounds of pine sprout tea and pine needle tea were analyzed and identified in this study. Eighty-one and 39 kinds of flavor compounds were detected in pine sprout tea and pine needle tea by GC, respectively. Among them, 55 and 29 flavor compounds were identified by GC-MS, respectively. Major flavor compounds of pine sprout tea were alpha-pinene, myrcene, beta-thujene, terpinene-4-ol, and delta-cadinene, and major flavor compounds of pine needle tea were alpha-pinene, isovaleryl alcohol, trans-caryophyllene, terpinene-4-ol, alpha-terpineol, and delta-cadinene. Link to this study.

Notes about Special Constituents
Juniper:

*Podophyllotoxin*

The leaves and roots of Eastern Redcedar are leading sources of Podophyllotoxin:

Podophyllotoxin is currently in high demand as the lead chemical precursor for the anti-cancer drugs etoposide and teniposide. We conducted a two-phase study: (i) screening of Juniperus and other related species and identified Juniperus virginiana as the species with the highest podophyllotoxin concentration... Both the essential oil and podophyllotoxin had similar concentration ranges as percent of dry J. virginiana leaves... Based on the essential oil composition, the J. virginiana accessions were divided into the following groups (chemotypes): (1) safrole–limonene–linalool; (2) safol–β-pinene–limonene–linalool; (3) β-pinene–limonene; (4) limonene; (5) limonene–linalool; (6) limonene–safrole;... (Cantrell, 2013)

*5,11,14-eicosatrienoic acid*

Juniper berry oil is rich in 5,11,14-eicosatrienoic acid, a polyunsaturated fatty acid similar to one found in fish oil, yet less prone to peroxidation. It's also called *juniperonic acid*, an intermediate between stearidonic acid (18:4 ω-3) and eicosapentaenoic acid (EPA, 20:5 ω-3). An animal study aiming to discover if a diet rich in Juniper Berry Oil might prevent hepatic reperfusion injury revealed the following:

"Juniper berry oil also blunted increases in intracellular calcium and release of prostaglandin E2 (PGE2) by cultured Kupffer cells stimulated by endotoxin. These results are consistent with the hypothesis that feeding a diet containing juniper berry oil..."
reduces reperfusion injury by inhibiting activation of Kupffer cells, thus reducing vasoactive eicosanoid release and improving the hepatic microcirculation in livers undergoing oxidant stress. (SM, 1998)

Obviously, they weren’t using essential oil but the actual oil extracted from Juniper Berry. Would oil infusions of Juniper Berry be enriched with juniperonic acid supplement?

Pine Needle

OPCS - (oligomeric proanthocyanidins) or condensed tannins
Jacques Masquelier of the University of Bordeaux, France, read the story about the 16th century rescue of Cartier and his crew which inspired him to explore the constituents of Pinus. Masquelier uncovered one of the powerful players -- OPCS. Proanthocyanidins are flavonoids that possess cardiovascular protection, antioxidative activities, and immunomodulatory activities. These polyphenols are abundant in nature; supplements are generally taken from grape seeds and the French maritime pine (pynogenol). Research reveals that these potent antioxidants have anticarcinogenic, anti-inflammatory, antimicrobial, and vasodilatory properties. As you might guess from their tannin component, they’re astringent.

Research into the pharmacokinetics reveals that proanthocyanidins don’t degrade well in the acidic environment of the stomach so they’re poorly absorbed in the upper digestive tract. However, even when very small amounts appear in urine after an oral dose, serum antioxidant levels go way up. Early research is suggestive of the possibility that they have direct antioxidant and protective effects on the colon. (Oligomeric Proanthocyanidins, 2003)

According to one study looking at the best extraction methods to obtain high levels of proanthocyanidins, an ethanol extraction pulled out more than a hot water extraction. (Nam-Young Kim, 2010). Yet another study on the needles from Pinus densiflora, validates the high antioxidant activities (and high proanthocyanidins content) of the hot water extract. This study claims a higher antioxidant activity and OPCS content for a hot water extract than for ethanol, hexane, hot water-hexane (HWH), or for hot water-ethanol (HWE). The study concludes, “Moreover, the antioxidant activity of the pine needle hot water extract was similar to well-known antioxidants, such as vitamin C. This suggests that pine needle proanthocyanidins and catechins might be of interest for use as alternative antioxidants.” (Park, 2011). The polar solvents (such as water) will contain the hydrophilic compounds including flavonoids, sugars, organic acids etc.

Resveratrol
Pine contains resveratrol, known as an anti-aging compound. Other plant sources of resveratrol include grapes, peanuts,
and Japanese knotweed.

Pinosylvin (Pine)
The antibacterial and antifungal activities of pinosylvin (3,5-dihydroxy-trans-stilbene), a constituent of pine, were studied and compared with those of resveratrol (3,5,4'-trihydroxy-trans-stilbene). Pinosylvin exhibited more potent growth inhibitory activity against Candida albicans and Saccharomyces cerevisiae. (SK, 2005)

Gathering
The best time to harvest the bark (branches) and needles is in the early spring time when the sap is rising. Collect your needles from trees at a distance from the roadside to be sure they haven’t been exposed to exhaust or chemicals, and far away from dump sites. Use alcohol to clean off your knife after you strip the bark from the twigs and branches. Whenever possible, take the young needles.

Pine Pollen (see the pollen section)

Juniper Berries: Pick the ripe purplish berry.

Preserving your Needles
To freeze, snip the needles into smaller pieces and place in a zip lock bag in the freezer until ready to use. You can also dehydrate them, or dry out over a stove or in an airing cupboard. When dry, you can store in a jar, or more interestingly you can process them to a powder in your blender and use to add an aromatic flavor to various recipes.

Preserving (and eating) Your Juniper Berries
If you watched the above video, this was covered. The juniper berries need to be well dried, a dehydrator is your best bet. Any moisture left in them can result in mold.

You can also preserve them by fermenting them into a beverage. In the 1500s, a Dutch pharmacist created a "new" inexpensive diuretic using the juniper berry. He called it gin (short for the Dutch word for juniper, genever). Juniper berries are also used as the primary flavor in the liquor Jenever and sahti-style of beers. There are several traditional juniper fermented beverages (look in database under “fermented beverage” for recipes).
Use them up in your cooking, for example Juniper berry sauce for meat dishes. Juniper-Cranberry sauce is divine. Add them to your homemade sauerkrauts. You’ll find recipes for Juniper in the database.

Overview Comparison of Pine Needle and Juniper Berry

<table>
<thead>
<tr>
<th>Pine Needles</th>
<th>Juniper Berry (also leaves for external use)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STIMULATE CIRCULATION, BOOST OXYGENATION</strong> Increase red blood cells, prevent some forms of anemia</td>
<td><strong>STIMULATES CIRCULATION, DISPELS WIND/DAMP/COLD AND RELIEVES JOINT AND MUSCLE PAIN</strong> CHRONIC RHEUMATISM, ARTHRITIS</td>
</tr>
<tr>
<td><strong>PREVENT AUTOIMMUNE DISORDERS - ANTIOXIDANT – HYDROXYL RADICALS</strong> When the immune system is over-activated we know there’s some fallout. One of the areas to guard against is the production of what are called hydroxyl radicals, a destructive byproduct, usually produced by macrophages and microglia when exposed to very specific pathogens (like some bacteria). Several neurological autoimmune diseases are correlated to hydroxyl radicals run amok, becoming toxic to nearby cells. All kinds of macromolecules including carbohydrates, nucleic acids (mutations), lipids, amino acids can be damaged by these rascals. Even worse news, a similar problem creature, superoxide, can be reined in and detoxified by the enzyme, superoxide dismutase but no detoxifying enzymes exist for hydroxyl radicals. We have to produce endogenous antioxidants like melatonin and glutathione or consume them in our diet. By now you won’t be surprised when I tell you that water extracts of pine needles come to the rescue, protecting DNA from hydroxyl radical damage and preventing apoptosis. (Jeong, 2009)</td>
<td><strong>PROMOTES MENSTRUATION, ENHANCES LABOR AND DELIVERY AND RELIEVES PAIN</strong> <em>uterus cold:</em> cramping menstrual pain before onset, delayed or stopped menses, scanty flow</td>
</tr>
<tr>
<td><strong>PROMOTES EXPECTORATION, RESOLVES PHLEGM DAMP/DRYNESS AND OPENS THE SINUSES; RESTORES THE BRONCHI AND RELIEVES PAIN</strong>  <strong>lun phlegm dryness:</strong> coughing, expectoration of hard scanty sputum, chest pain  <strong>lun phlegm damp:</strong> coughing, expectoration of copious white sputum, chest pain, wheezing  <strong>BRONCHITIS</strong> (acute &amp; chronic), pneumonia</td>
<td><strong>PROMOTES EXPECTORATION, OPENS SINUSES, ANTISpasmodic</strong>  <strong>ASTHMA</strong>, <strong>COLDS</strong>, <strong>BRONCHITIS</strong>, <strong>SINUSITIS</strong>, <strong>PHARYNGITIS</strong></td>
</tr>
<tr>
<td><strong>PROMOTED TOOTHACHE</strong></td>
<td></td>
</tr>
</tbody>
</table>

Birth Control (Contraception)

Various N. American indigenous peoples used the berry for female contraception. They were also used in ancient Greece/Rome for both men and women as a barrier to contraception (details in the database under Birth Control, Natural). A few studies show promise as an oral contraceptive. (Chaudhury, 1993)
**head damp cold:** painful congested sinuses, frontal headache, colds SINUSITIS WITH HEADACHE. Eliminate excess mucus and phlegm while neutralizing pathogens found in your sinuses.

Use the tea as gargle for sore throat

Steam from decoction or essential oil to open clogged sinuses.

**VITAMIN C SOURCE STIMULATES IMMUNITY, PROMOTES TISSUE REPAIR**

According to the [NutritionData](#) web site, the amount of vitamin C from pine needles is reported to be five times the amount found in a lemon, which is 83.2 mg. A cup of pine needles would yield more than 400 mg, brewed. Vitamin C is an essential element for our immune system, as it stimulates the production of white blood cells. When healing is needed, is a crucial component of collagen, which is necessary to create new cells, muscles, tissues, and blood vessels. By the way, the vitamin C won’t be lost by the hot water extraction.

**Tonifies the Yang, Opens the chest and relieves wheezing; restores the adrenals and generates strength**

**lung and kidney Yang deficiency:** mental, physical and sexual fatigue, loss of endurance, chilliness, asthmatic breathing, tight chest, chronic cough ASTHMA, ADRENAL DEFICIENCY (cortex & medulla) CHRONIC FATIGUE, exhaustion, loss of endurance

**CANCER PREVENTATIVE**

Water extracts from pine needles protect DNA from damage, according to one study. The study made the bold claim that pine needle extract “possesses a spectrum of antioxidant and DNA-protective properties common to cancer chemopreventive agents.” (Jeong, 2009)

Using ethanol extract of (*Pinus densiflora*): Potential anticancer effects, antioxidant, antimutagenic, and antitumor activities were assessed in vitro and/or in vivo on the usual suspects (rodents) using the Pine Needle Ethanol extract and a freeze dried powder of its rich in terpenes and terpenoids with the anti-asthmatic property of terpineol and terpinen-4-ol, grant it the ability to treat asthma. It treats coughing spasms – approximately 5 spoonsful of dried berries in a quart of white wine for 7 days. Strain and drink as needed.

**PROMOTES URINATION, REMOVES FLUID CONGESTION AND RESOLVES TOXICOSIS; DRAINS DAMP, DISSOLVES DEPOSITS AND STONES, AND BENEFITS THE SKIN**

metabolic toxicosis with kidney Qi stagnation: malaise, skin rashes, poor appetite, urinary irritation

CHRONIC GOUT, RHEUMATISM, ARTHRITIS

URIC ACID DIATHESIS with urinary irritation

DEPOSITOR DIATHESIS with urinary stones, arteriosclerosis

ECZEMA, DERMATOSIS, PSORIASIS, ACNE

**kidney fluid congestion:** edema from the ankles upwards or waist downwards, puffy eyes

EDEMA, ascites

The diuretic properties of juniper are from the ability of apigenin and glycolic acid, chlorogenic, caffeic and ascorbic acid of the fruit to stimulate the kidneys and increase urine production. Diuresis occurs as a result of the irritant effect of these components on the renal parenchyma. Its richness in potassium and calcium counteracts the sodium and contributes to the same purpose. The ability to increase urine output can be exploited in diseases such as rheumatoid arthritis, gout, dropsy.

**Grit in the kidneys:** It facilitates the removal of gravel formed in the kidneys and prevents the formation of kidney stones. However, prolonged ingestion can produce albuminuria or presence of albumin in the urine. (Infusion of half a teaspoon of dried berries per cup of water. Take a couple of cups a day between the two main meals)
the needles. Tumor growth was suppressed, cancer had a heck of a time proliferating and failed miserably. In sum, researchers recommended use of Pine Needle Extract for cancer prevention. (Kwak, 2009)

**Pine Needles – External Uses**

- **Baths** – Skin Conditions
  - Eczema, psoriasis, open sores
  - Poison ivy
- **Footbath to improve blood circulation**
- **Hair rinse** for dandruff
- **Washes (using the decoction)** Used on wounds to prevent infection
- **Pine resin is great for removing sugars from the teeth.** Chew up pine needles until it makes a ball and scrub your teeth with it.
- **Smoke from burning, as a smudge** To remove negative influences, thought to have antimicrobial effects. Acts as a fumigant against insect pests. Uplifting as an incense.

**ANTHELMINTIC AGAINST HELMINTHS**

A study done on a pine species native to the Himalayans, the Chir pine (Pinus roxburghii) confirmed that its anthelmintic against helminths. The needles are traditionally used to rid the intestinal tract of worms. Do other species of pine have the same effect? Possibly. (Sharma, 2013)

As you can see, we have much more to say about the Juniper Berry, but we aren’t finished with Pine just yet! So far we’ve only examined uses for the pine needle itself. Still to come, the pollen, the resin and sap, the buds, the cones, and of course, the essential oil.

**BREAST CANCER**

In a study using a water extract of Juniperus communis, inhibited growth and invasion of breast cancer cells. (S V. S., 2007)

**TONIFIES UROGENITAL QI, HARMONIZES URINATION, RELIEVES INCONTINENCE AND STOPS DISCHARGE**

genitourinary damp cold (Kidney Yang deficiency); frequent, scanty or copious clear urination with irritation, lumbar pain, clear vaginal discharges, mucousy urine

CHRONIC MUCOUS CYSTITIS, LEUCORRHEA

DYSURIA, POLYURIA, ENUMERESIS, ALBUMINURIA, cervical erosion

STIMULATES DIGESTION, WARM THE MIDDLE, RESOLVES MUCOUS DAMP, RESOLVES ACCUMULATION AND RELIEVES FULLNESS

intestines damp/cold (Spleen Yang deficiency): abdominal swelling, diarrhea, chilliness, appetite loss

CHRONIC GASTROENTERITIS

PEPTIC ULCER (atonic type) from GASTRIC HYPOACIDITY

intestines mucous damp (Spleen damp) with food stagnation; indigestion, gurgling distended abdomen, heaviness of body and head, headache

INTESTINAL DYSBIOSES

DIABETES (supportive). Some indigenous peoples such as the Dineh, traditionally used juniper to treat diabetes.

Used to stimulate the appetite and facilitate digestion. The anti-anorexic properties come from its zinc content, while its bitter compounds, especially, juniperin, increase stomach acid production, aiding digestion. Improvement is
seen in consequences of poor digestion such as flatulence, aerophagia, dyspepsia or pain in the upper abdomen and heartburn. Father Kneipp claims it produces marvelous effects in the treatment of disease relating to food absorption problems, improving nutrition by its action on the stomach.

**STIMULATES IMMUNITY, REDUCES INFECTION AND ANTIDOTES POISON; PROMOTES TISSUE REPAIR**

**PREVENTIVE in EPIDEMICS**

**CHRONIC VIRAL and BACTERIAL INFECTIONS** of urinary, digestive, respiratory systems (incl. cystitis, urethritis, gonorrhea)

**POISONING** from food or herbs

As an antiseptic, juniper is an effective remedy for traveler's diarrhea.

**ATONIC WOUNDS,** ulcers, sores

**SKIN PARASITES**

In the old days doctors chewed Juniper berries when treating epidemic infections as an antiseptic barrier.

**Juniper leaves – External Uses**

With Juniper the leaves, twigs, wood are often combined in a decoction or burned for smoke and ash.

- **Footbath:** to improve blood circulation in the feet and reduce inflammation.

**Washes with decoction:** antiseptic wash to sanitize brewing equipment, cooking utensils, surgical instruments, hands, and counters. and for use in general washing and cleaning. Topically, infusions of juniper berries have been used as antibiotics when treating various sores or wounds, including eczema, psoriasis, and other skin conditions.

- Berries, leaf, twigs, wood are active against: *Staphylococcus aureus, Pseudomonas aeruginosa, Shigella dysenteriae,*
Using the Leaves/Needles

First, a very few cautions: Since pine contains some very concentrated compounds, including a few linked to miscarriage, pregnant women (or those wanting to become pregnant) should avoid internal use. As with most herbs, when used for the first time, start with small doses to see how well your body responds.

White cedar leaves (Thuja occidentalis) can be taken as a tea. However, the leaves of Juniperus species are only used externally. Some recent research into the healing potential of aerial parts of Juniper suggest that the leaves could make an extract effective against mycoplasma, tuberculosis in particular. This needs further exploration, read the study and judge for yourself:

**Anti-mycobacterial natural products from the Canadian medicinal plant Juniperus communis.**

**ETHNOPHARMACOLOGICAL RELEVANCE:**

Common juniper, Juniperus communis, is amongst the plants most frequently used by the indigenous peoples of North America for medicinal purposes. The First Nations of the Canadian Maritimes use infusions of juniper primarily as a tonic and for the treatment of tuberculosis. Previous investigations of extracts derived from the aerial parts of J. communis have shown it to possess anti-mycobacterial activity. The aim of the study is to isolate and identify anti-mycobacterial constituents from the aerial parts of J. communis.

**MATERIALS AND METHODS:**

Methanolic extracts of J. communis needles and branches were subjected to bioassay guided fractionation using the microplate resazurin assay (MRA) to assess inhibitory activity against Mycobacterium tuberculosis strain H37Ra. The anti-mycobacterial constituents were identified by NMR, MS and polarimetry.

**RESULTS:**

The diterpenes isocupressic acid and communic acid and the aryltetralin lignan deoxypodophyllotoxin were isolated from the J. communis extract. Isocupressic acid and communic acid (isolated as an inseparable 3:2 mixture of cis and trans isomers) displayed MICs of 78 μM and 31 μM and IC(50)s of 46 μM and 15 μM against M. tuberculosis H37Ra respectively. Deoxypodophyllotoxin was less active, with a MIC of 1004 μM and an IC(50) of 287 μM.

**CONCLUSIONS:**

Isocupressic acid, communic acid and deoxypodophyllotoxin were identified as the principal constituents responsible for the anti-mycobacterial activity of the aerial parts of J. communis. Although further research will be required to evaluate the relative activities of the two communic acid isomers, this work validates an ethnopharmacological use of this plant by Canadian First Nations and Native American communities.
Making Pine Needle Tea
Collect a handful of young green needles. Remove the brown sheaths at the base, wash the needles, chop them into small pieces of about a quarter- to half-inch long. Heat a cup of water to near boiling, pour it over a tablespoon of the needles, and allow it to steep, covered, for five to ten minutes, until most of the needles have settled to the bottom of the cup.

For a more medicinal tea, bring a cup of water to a full boil, add a tablespoon of chopped needles, then cover and allow the needles to boil for an additional two to three minutes. Remove the water from the heat and allow the tea to continue steeping, still covered, until it’s cool enough to drink. Most of the needles should have sunk to the bottom. Although this process causes the brew to taste a bit more like turpentine, it also releases more of the therapeutic compounds found in the needles’ oils and resins. For maximum effect, the recommendation is to drink several cups a day, making it fresh each time. You’ll get the essential oils in the infusion which enhance blood supply to the lungs, the essential oils will also help kill off bacteria and viruses.

Miscellaneous Pine Needle Recipes
Pine Needle Vinegar or Oil
- 500ml Glass Jar, very clean and very dry.
- 500ml of either Cider Vinegar or Organic Cold Pressed Oil
- Several handfuls of Pine Needles

Slightly crush the pine needles with a rolling pin and pack them into the jar. Pour on as much vinegar or oil to fill and cover the jar. Allow to infuse for up to 6 weeks. Strain and use or if you wanted a stronger infusion, or pack in more fresh crushed needles. For a more balsamic tasting vinegar, add a tablespoon of coconut sugar.

Aside from their medicinal benefits, both are tasty additions to salad dressings. The vinegar can be taken in a cup of warm lemon and honey water to ward of colds and flu. The oil is great to massage tired aching limbs. Since pine is so helpful for skin conditions like psoriasis you could use this oil as a base in making a salve or ointment for irritated skin or fungal infections.

Pine Needle Sugar or Honey
Place crushed pine needles into a jar of honey or coconut sugar and leave for several weeks or months.

Use in teas, desserts, for variety, add pieces of lemon or orange peel.

Pine Bouquet Garnish
Make a little bunch out of sprigs of pine, rosemary, thyme, bay leaves and tie together with a little hemp or organic cotton string. Drop it into the pot if you’re making a stew, soup or grain based cooked dish and allow the flavors to permeate the dish before removing.

Pine Baths:
To make the bath, gather several large handfuls of fresh pine needles and boil them in a large pot of water for 10 minutes. Pour the entire mixture directly into a warm bath. Straining out the needles is optional since they are too big to slip down the drain. Soak for 30-45 minutes. If you take saunas or sweat lodge, the tea is great splashed on the stones.

Pine Cones & Needles Potpourri
- 6 cups dried pine needles (not brown)
- 2 cups small pine cones
- 2 cup dried orange peel
- 1 cup dried rosehips
- 1 cup dried rose & marigold petals
- 1 cup broken cinnamon sticks
- 4 tablespoons of orris root (optional)
- 15 to 20 drops of oil of pine (more or less as desired)
In a bowl, place the oil on the orris root if using. Orris root is traditionally used to fix scent. Otherwise, sprinkle the oil on the pine cones, and gently mix all the ingredients together.

To use, place into open containers throughout the house. Add more essential oil as needed.

Keep out of reach from children and animals.

Some other potpourri pine recipes can be found here

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**Pine Resin or sap**

All the Pines yield resin in greater or smaller quantities, obtained by tapping the trees. The crude resin is almost entirely used for the distillation of Oil of Turpentine and Rosin, only small quantities being employed medicinally - for ointments, plasters, etc. When the Oil of Turpentine is entirely distilled off, the residue is Rosin or Colophony, but when only part of the oil is extracted, the viscous mass remaining is known commercially as common Crude Turpentine. Sap can be cooked down to create syrups.

You can tincture pine sap for colds, coughs and bronchitis.

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**Let's clarify the difference between pine sap, pitch and resin:**

**Sap:** more of a liquid, like honey or less viscous than honey. Sap is the sugary secretion from plants as well as trees.

**Pitch:** an intermediate between a liquid and a complete solid. Pitch is like crystallized honey that’s been sitting.

**Resin:** usually refers to the most solid of all these forms. Used for violin bows.

**Pine Sap Tincture**

This will be a strong antibacterial you can use as an expectorant. After you’ve collected your sap, barely cover it with 198 proof alcohol (grain alcohol, Gemclear, Everclear) in a jar with a tight lid. Label it, leave it for 6-8 weeks. Use in 5-10 drop doses.
Pine Sap Honey
Gently cook honey and sap together until well combined.

Pine Sap or Pitch Salve
Great wound healer. You can use the sap directly on wounds or use it in your salve recipes. Kiva Rose tells us how to make it here. Especially useful for pulling out splinters of wood or even glass. Combined with plantain to treat boils.

Turpentine
Oil of Turpentine is a good solvent for many resins, wax, fats, caoutchouc, sulphur, and phosphorus, and is largely employed in making varnish, in oil-painting, etc. Medicinally, it is much employed in both general and veterinary practice as a rubefacient and vesicant, and is valuable as an antiseptic. It is used for horses and cattle internally as a vermifuge, and externally as a stimulant for rheumatic swellings, and for sprains and bruises, and to kill parasites. It’s also used for people.

Pine Essential Oil
Unless otherwise stated, Pine essential oil is taken from the Scots Pine (*Pinus sylvestris*). Pine essential oil is usually obtained using steam distillation of fresh twigs and needles. Pine cones are also used by many manufacturers. Since pine trees are so abundant in nature, the oil is very cheap and widely available.

Juniper Berry Essential Oil
Before you purchase check to see if the essential oil is distilled from the berries or the needles and wood. Juniper berry essential oil is believed to be the superior oil but its more expensive, making juniper berry oil open to adulteration. Even when the label says Juniper Berry, it can be made entirely of the leaves and wood, usually an inferior product if you’re looking for the activity of Juniper Berry.

Cedarwood Essential Oil
However, various species deliver different essential oils, some from leaves, branchlets and heartwood are quite effective. Take Cedarwood Essential Oil, for example, it’s from *Juniperus ashei* (Texas) or *Juniperus virginiana*. Unless it’s taken from *Cedrus spp.*, usually *Cedrus atlantica*, a different genus and different oil sold as Atlas Cedar essential oil. The sources for Cedarwood essential oil should be specified on the label and when you read articles about Cedarwood EO, check to see which one they’re referring to.

Cedarwood EO doesn’t protect us from mosquitoes but it’s a show stopper when it comes to bedbugs! (Cedar Oil Results from Rutgers University, n.d.)

Cedrol, a sesquiterpene alcohol makes up about 19% of cedarwood oil Texas and 15.8% of cedarwood oil Virginia. It turns out that cedrol is very attractive to female mosquitoes after they’ve fed so it has a potential for use in mosquito traps.

Inhalation of cedrol has an effect on the autonomic nervous system and heart rate variability. It increases the parasympathetic, decreases the sympathetic…its relaxant effect is genuine. (Dayawansa, 2003)

A study testing 96 essential oils to determine which had the greatest bactericidal activity against several common pathogens ranked Cedarwood EO as one of the most effective against *Campylobacter jejuni* and *Listeria monocytogenes*. (Friedman, 2002)

Successful Treatment was the title of this randomized trial on 86 men diagnosed with male pattern baldness. Improvement resulted from daily massage with a blend of essential oils including Thyme, Cedarwood, Rosemary, Lavender in a carrier oil of jojoba and grapeseed oil. (IC, 1998)

Studies done on Algerian *Juniperus Phoenicia* essential oil from berries, leaves and twigs has this to say:
...The berry essential oil was ineffective against all but two of the strains tested, whereas the essential oil of dried leaves significantly inhibited all strains but Pseudomonas aeruginosa, which turned out to be the most resistant strain overall. However, Escherichia coli was the most susceptible to the essential oils tested. The essential oil of dry leaves was highly active against *Candida albicans*, outclassing even the standard antifungal substances. (A, 2016)

Another study using essential oils from a combination of the branchlets and fruits of *J. communis* subspecies *hemisphaerica* showed powerful anti-glycation effects protective against diabetes. (S. A. , 2014)

Here’s a study using essential oil made from the heartwood of *Juniperus virginiana* L., *Juniperus occidentalis* Hook., and *Juniperus ashei* J. Buchholz. Each has powerful wound healing qualities.

And then there’s cedarwood essential oil from

**Safety of Pine and Juniper EO**

In an article written by Ron Guba, “Investigating Essential Oil Toxicity Myths”, he has this to say about Juniper EO (and Pine):

Juniper "Berries" (*Juniperus communis ssp. communis*) and the essential oil derived from them, have long been indicated as a useful diuretic.

However, since the late 1800's onwards, Juniper essential oil (and other high-terpene hydrocarbon containing essential oils, such as in various *Pinus* species) has been suggested to be a kidney irritant, that should not be used on a long-term basis nor during acute kidney disease. Such statements are still mentioned in a number of Aromatherapy texts.

It appears that the origin of these statements came from the use of large, fatal doses of Juniper oil being given to dogs. Such high doses cause clouding of the urine, which was then assumed to be due to kidney damage. It appears, though, that such cloudiness was simply due to the presence of large quantities of Juniper oil metabolites.

More recent studies using laboratory rats have found no kidney damage, even when high oral doses of Juniper oil were given.

The authors hypothesized that the reputation of Juniper oil as a kidney irritant may have come from the use of essential oils containing high levels of the monoterpene hydrocarbons, α & β-pinene. The Juniper oil used in the study was said to have low levels of pinenes.

This study does highlight the non-irritancy of Juniper Berry oil. But the further hypothesis regarding the irritancy of pinenes does appear to be unfounded.

Both Juniper Berry and Juniper branches/berries essential oil contain significant amounts of α & β-pinene, as well as other terpene hydrocarbons (Juniper Berry - α-pinene up to 46%, sabinene up to 28%, myrcene up to 8% and Juniper branches/berries - α-pinene from 40 to 90%, sabinene from 10 to 40%). (67) Given such similarities in terpene hydrocarbon content, such a hypothesis is not supported. (PeterK, 2005)

A number of reports concerning the ingestion of massive amounts (up to 500mL) of Pine essential oil (from *Pinus pinaster* and related species), which generally consists of up to 90% of α & β-pinene, do not show any kidney dysfunction nor damage. Arguably, both gastric lavage and hemoperfusion are generally employed to reduce the quantity of essential oil compounds from both the stomach and the blood circulation (a lethal dose of "Pine" oil is approximately from 60 to 120mL). Nevertheless large quantities of metabolites, such as bornyl acetate are still excreted via the kidneys over a number of days. Of all the essential oil compounds, only apiol (as in Parsley Seed oil) has been shown to create kidney damage, as observed in post-mortem studies (PeterK, 2005)

**Comparison of Pine EO & Juniper Berry EO**
### Pine EO

Analgesic, diuretic, anti-inflammatory, decongestant, antiseptic, deodorant and expectorant.

**Diluted in a bath or blended with massage oil:**
- fungal skin conditions.
- psoriasis
- itching
- pimples, acne
- eczema
- skin diseases
- poor skin - It’s antioxidant properties can combat the negative effects of free radicals, improving the overall appearance of skin.
- athletes foot
- scabies
- sores
- fleas.
- treat respiratory and urinary tract infections
- boost the immune system
- Applied topically, it can also be used for a remedy of the scalp, especially in cases of dryness and dandruff (an added bonus, it helps rid the hair of lice).
- Sore Muscles: both analgesic and anti-inflammatory, topical to relieve general muscular aches and pains
- Stress Reduction (also by inhalation of aroma), it’s a mood elevator and may improve memory

**Diffused:**
- a disinfectant protecting your home and body from a wide variety of germs.

**Internally (1-2 drops in gel cap)**
- **Metabolism & Cleansing:**
The oil gives a boost to metabolism and your activity levels. By acting as a diuretic and treating intestinal problems it plays a role in detoxification. Pine essential oil stimulates the body to process and eliminate toxins faster and has been used for food poisoning.

### Juniper Berry EO

Antiseptic, anti-inflammatory, astringent, healing and vulnerary properties.

**Antibacterial/Antifungal:**
Juniper essential oil was evaluated for the antimicrobial activity against sixteen bacterial species, seven yeast-like fungi, three yeast and four dermatophyte strains. It showed similar bactericidal activities against Gram-positive and Gram-negative bacterial species as well as a strong fungicidal activity against yeasts, yeast-like fungi and dermatophytes. The strongest fungicidal activity was recorded against Candida spp. (S P. , 2005)

**Inhalation therapy against biofilms of Staphylococcus aureus and Pseudomonas aeruginosa:** for chronic respiratory problems
(Camporese, 2013)

**Diluted in a bath or blended with massage oil:**
- relieves nervous tension and calms the nerves.
- helps in bladder problems (inability to pass urine) associated with multiple sclerosis
- cystitis,
- gout
- psoriasis
- dandruff
- **Sore Muscles and Joints:** Dilute about 10 drops of juniper essential oil in 100 drops of Olive oil. Rub on the painful area
- **Acne & Eczema:** 10 drops in glass of water. Wet a towel with the liquid, apply to the affected area. Or equal parts of juniper essential oil, rosewater, and witch hazel for a lotion. Also good for oily skin.

**Diffused:**
- a disinfectant protecting your home and body from a wide variety of germs.

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**Usage**

Add 4-6 drops of undiluted essential oil to warm bath water or dilute at 50/50 ratio with organic coconut oil or olive oil and apply to chest for respiratory distress. You can also put in aromatherapy diffuser.

**Internal use:** 2 drops of essential oil in a teaspoon of honey up to three times a day after meals. Don’t take internally if you have kidney problems.
Pine or Juniper Hydrosol

Add 1 teaspoon of hydrosol to 32 ounces of distilled water and shake well. Drink 8-16 ounces throughout the day for up to a week.

Pine Buds

Pine buds are considered to be great for coughs and congestion, very good during an acute stage. They’re rich in volatile oils, resins, tannins, vitamin C. You can decoct them for their expectorant, antiseptic, antiphlogistic, diuretic and cholagogic properties.

Pine Pollen

Pine pollen has been used in traditional Chinese medicine for thousands of years as both food and medicine. In recent years it’s become popular as a superfood tonic and for its androgenic effects on both men and women. If you’re looking for the androgenic boost, use the tincture.

Helps skin remain elastic and strong

Nutritional properties of pine pollen

Here’s a good analysis of the proteins, vitamins, minerals, lipids found in raw pollen

Increasing Androgen Hormones

While pine pollen does contain some phytohormones, including small amounts of testosterone, it does not directly increase the body’s production of androgens. In cases of hypogonadism it’s better to look to gonadotropic herbs (in addition to pine pollen).

These signal the anterior pituitary to stimulate release more luteinizing hormone and more follicle-stimulating hormone to communicate with the gonads to produce androgens. In addition, lowering sex-hormone binding globulin results in higher levels of free testosterone. Aromatase is an enzyme that changes testosterone into a harmful form of estrogen so we use aromatase inhibitors. Increasing testosterone involves several important steps and support for the entire endocrine system. Here’s a video exploring just how pine pollen may be increasing androgens.
The entire endocrine system needs support.

Some uses in Chinese medicine include:

- Relieving rheumatic pain
- Relieving fatigue
- Increasing endurance
- Strengthening the immune system
- Strengthening the heart
- Strengthening the GI tract and stomach
- Increasing mental agility
- Healing prostate problems
- Increasing agility
- Decreasing weight
- Benefits of taking pine pollen, both for men and women:
  - Restore hormone levels in Andropause and Menopause
- Regulate and strengthen the immune system
- Reduce cholesterol
- Relieve rheumatic pain
- Enhance metabolic function of the skin and nourish the hair at its roots
- Adjust the endocrine system and raise immunity power of the organs
- Improve endurance for high efficiency and quick pace
- Protect the cardiovascular system and increase superoxide dismutase levels (potent antioxidant) in the heart, blood, liver, and brain
- Accelerate activity of the liver cells and regulate bile secretion
- Regulate prostate function
- Common cold preventative
- Nourish the brain
- Stimulate liver regeneration
- Increase free testosterone levels in the blood
Storage
Store in a cool place and if you purchase the powder, use within 2 months of opening to avoid moisture accumulating in the pollen.

Powder, Tincture, Capsules
Raw pine pollen is a superfood targeting the system. The tincture is more effective at raising androgen levels. You can purchase cracked pine pollen which delivers about 20% more of pollen's nutrients to the body. However, plain ol’ raw pollen gathered by you, will suffice.

Dose
Tincture: a full dropperful three times a day. (30 drops or 1.5 ml three times a day). Hold it in the mouth for at least a minute so it can stay in contact with the mucus membrane long enough to enter the bloodstream and bypass the digestive system. Women using the tincture to improve their testosterone/estrogen balance, especially after menopause start with 15 drops, 2x a day (it can help with fat loss)

Using the powder or capsules as a nutritive, take 2-3 capsules 2-3 times a day or 1.5-3 tsp of powder daily on an empty stomach.

Cautions:
If you’re sensitive to pine pollen start with tiny doses until you know you aren’t going to react to it. The androgen-enhancing tincture is NOT for young men in their 20s or for body builders since there’s a sorrowful side effect of increasing testosterone too much called “testicular shrinkage”

Harvesting
Using Pine Pollen Powder

Couldn’t be easier, tastes good, add it to anything. In Korea where pine pollen has been collected forever (and groceries are said to sell it by the pound), its added to baked goods, sauces, soups. If you eat it off of a spoon be careful not to inhale it! It’s very light.

Male catkins, edible

They have a slight sweetness, peel off the papery parts and eat them raw as is or preserve in raw honey. If there’s still pollen on them, the honey will collect and preserve it as well.

Pine Pollen Tincture

Use 70% alcohol, roughly 2-parts alcohol to 1-part pollen and proceed in the usual tincture making method.

Storing Pine Pollen

If you purchase it, use within 2 months of opening to prevent moisture from getting to it. Or you can use the freezer method for both purchase or foraged pollen.

Pine Cone Extract (Scotch Pine)

There’s a long history of using pine cone extracts in Japan, usually the Japanese White Pine (*Pinus parviflora*).

Research efforts into the medical uses of pine cone extract are ongoing and continuous. Each new set of results expands the line of questioning and broadens researchers’ understanding of how they can help the body heal itself. Published studies indicate that pine cone extract (PCE) inhibits the growth of HIV in human T cell cultures, and even the growth of influenza and the herpes simplex virus. In laboratory tests it has been shown to enhance immunity, inhibit tumor activity, and suppress induction of lymphoma (a type of cancer involving cells of the immune system). There has been more than twenty years of positive research that supports the use of pine cone extract (PCE). It is an invaluable tool in addressing chronic immune deficiency conditions. Check out all of the research compiled in the Ultimate Herbal Database.

Pine Bark

In Ayurveda, pine bark is used for when there is too much Pitta (fire). It’s considered to be very cooling and is used especially for urinary tract infections, enlarged prostate, anuria, stricture in urinary tubes. Whenever there is too much uric acid, or other chemicals which are acidic in nature, alkalizing plants are called for. Pycnogenol is its natural alkaline.

Extracts from pine bark are reported to be effective scavengers of reactive oxygen, can lower serum lipids, and may help delay aging and breast cancer. (Yua, 2008)

Pine Bark Extract (ethanol)

Pine Bark Study:

**Potential biological efficacy of Pinus plant species against oxidative, inflammatory and microbial disorders**

*Pinus roxburghii, Pinus wallichiana, Pinus gerardiana*

Results: The qualitative phytochemical analysis of hydro-alcoholic stem bark extracts of three plant species revealed the presence of various biochemical compounds such as alkaloids, flavonoids, glycosides, triterpenoids and saponins. Quantitative phytochemical analysis of plant extracts showed the presence of phenolics, flavonoids, tannins, beta-carotene and lycopene. Plant extracts of three pinus species showed significant antioxidant activity against DPPH, nitric oxide and H2O radicals. In in-vitro anti-inflammatory investigation, Pinus roxburghii exhibited highest protection against albumin denaturation 86.54 ± 1.85 whereas Pinus gerardiana showed 82.03 ± 2.67. Moreover, plant extracts were found to prevent the growth of microorganisms Pseudomonas aeruginosa, Escherichia coli, Staphylococcus aureus and Candida albicans showing promising antibacterial and antifungal activities against Candida albicans.

**Conclusion:** The findings of the present study derived the rational for the therapeutic usage of Pinus which is a highly timber yielding plant from Himalayan region, against oxidative, inflammatory and microbial diseases.
Diabetes & Obesity
An animal study found that Pine Bark Ethanol Extract effectively suppressed the increase of postprandial blood glucose level by delaying absorption of diet, and body weight was controlled. The study concluded: Pine Bark Extract can be used to suppress postprandial hyperglycemia of diabetic patients. It also can be applied for control of obesity by decreasing the food efficiency ratio, especially carbohydrates. (YM, 2005)

Pine Bark Cough Syrup
The bark works quickly to break up and expel trapped phlegm, it helps kill infection and reduces inflammation in the upper respiratory tract. Here's a cough syrup recipe from Euell Gibbons:

Put 1/2 cup of coarsely ground white pine bark in a mason jar and cover it with 2/3 cup of boiling water. when cool add 1/2 cup of whiskey, seal the jar and let it sit overnight. shake the jar vigorously a few times to make sure the contents mix. The next day, strain the bark and add one cup of honey to the liquid. Shake the jar thoroughly to make sure the honey dissolves. The dose is one tablespoon for adults and one teaspoon for children "as needed".

Pine Bark Elixir-
Makes 1 pint
Starting with about 3/4 cup of dried white pine bark, cut or chop into small bits to make about 1/2 cup. Place in the bottom of a pint mason jar. Add 1/4 cup of dried rose petals and 1/4 cup of dried red clover blossom. Fill with brandy until 3/4 full and add honey to top it off, being sure to leave a little room at the top. Cover and shake daily for one moon cycle. Strain, bottle and label. This will keep for a long time without refrigeration and is excellent taken for a cough of any sort. It is strong- I take 2 droppers full, 3-4 times per day.

Pine Needle Oil
Cancer
Pine Needle Crude Extract and Liver Cancer:

Pine needle oil from crude extract of pine needles has been used as an anti-cancer agent in Traditional Chinese Medicine. The a-pinene is a natural compound isolated from pine needle oil which has been shown anti-cancer activity. In previous study, we found that pine needle oil exhibited significant inhibitory effect on hepatoma carcinoma BEL-7402 cells. In this study, we investigate the inhibition of apinene on hepatoma carcinoma BEL-7402 cells in vitro and in vivo and further explore the mechanism.

Turpentine
Terenbinth – turpentine was used, and is still used, since ancient times. Terenbinth is a form of turpentine taken from a specific tree native to the Mediterranean region, Pistacia terenbinthus. It was used in Babylon to treat stomach problems, inflammations and ulcers. Turpentine taken from pines is used in a similar fashion. According to Wikipedia: "Turpentine was a common medicine among seamen during the Age of Discovery, and one of several products carried aboard Ferdinand Magellan's fleet in his first circumnavigation of the globe."

Older folks here in Arkansas recall their mothers or grandmothers giving it to them as children as a preventative against infection. A student recalls how, when she was very young and had trouble breathing from mucous build up in her lungs, her mother gave her a few drops on a spoon. It acted as an emetic causing her to vomit, releasing the mucous and freeing her lungs.

The Merck Manual of appropriate and accepted treatments for recognized diseases, published in 1899, states that turpentine therapy is effective for a wide range of conditions including gonorrhea, meningitis, arthritis, abdominal difficulties and lung disease. However, the 1999 Merck Manual just mentions the dire effects of turpentine poisoning with destruction of the kidneys and lungs.
As a stimulant to the arterial, venous (opening obstructions in veins) and nervous system it was used to restore the organs, particularly the kidneys where it’s said to treat blood in the urine.

**Pleurisy Treatment**
A cloth was soaked in heated turpentine (take care with heating turpentine as its flammable), then wrung out and applied to the back or chest. Depending on skin sensitivity it was left on for 15-30 minutes.

**Pneumonia**
The external compress as above and it was taken internally, just a few drops with a carrier such as a sugar cube or honey.

**Narcotic Poisoning**
An enema effect was also used to remove narcotic poisoning, 1 part olive oil, coconut oil or ghee to 1 part turpentine taken internally.

**Stomach Ulcer**
Equal parts of turpentine and castor oil internally but I’m not sure of how often this was taken.

**Typhoid**
10 drops taken orally on a sugar cube (in honey would do) every 2 hours during the day and every 3 hours at night.

**Tapeworms**
1-2 tablespoons of turpentine mixed with the same amount of castor oil and taken floating on milk. Repeated every second or third day until the fragments of the worm ceased to appear in the stool. For children, one teaspoonful of sugar, three to four drops of turpentine and one teaspoonful of castor oil.

**Candida**
Dr. Jennifer Daniels is one of our contemporary proponents of using turpentine. She read about how slaves used to take a teaspoon of turpentine over sugar several times a year as a disease preventative and through her explorations, discovered it to be an excellent treatment for candida. Her remedy: Slowly pour a teaspoon of turpentine over sugar cubes or a rounded teaspoon of white sugar to soak it all up. Then chew the cubes or soaked sugar and wash the mixture down with water. Instead of sugar you can use honey. Dr. Daniels generally recommends doing this twice a week for several weeks, but initially daily with long-term Candida. Continue until the problem is fixed - which can happen surprisingly quickly.

She says before starting turpentine therapy it is essential to prepare by drinking lots of water, adopting a suitable anti-Candida diet and cleaning the bowel. At this stage, it is necessary to have three daily bowel movements, otherwise the pathogens may get into the blood. She also believes that the use of sugar in this case is beneficial in stopping the sugar craving so common with Candida and in attracting the Candida to the "poison". (Daniels)

**Turpentine 1-2 drops in Garlic extract**---will benefit asthmatics—people having difficulty breathing---circulation-inflammation—potent free scavenging—antiparasitical—anti yeast-antifungl-antibacterial-anti viral

**Turpentine and honey** 1tsp of turpentine in 3-4 oz of honey (increase honey if too strong) and use orally for anti-inflammatory-breathing-anti fungal-viral-bacterial-antioxidant

**Turpentine and Peanut oil rubs**---use 1 oz of turpentine with 4-5 oz of peanut oil—mix well or shake vigorously---glass container---apply to damage or congested skin as well as—Open wounds—festering infections—stiff joints---apply topically in the bronchial area for penetration to break down lung infection

**Internal Uses for Terebinth –Turpentine**
Modifies tracheo-bronchial secretions

Haemostatic (slows down or stops bleeding)

Diuretic

Antitheumatic

Antidote to Phosphorus Poisoning

Genitor-Urinary Antiseptic (used as a douche as well injectable

Dissolves Gallstones

Antispasmodic

Vermifuge (removes worms and parasites)

Urinary and Renal Infections-cystitis urethritis (inflammation of the urethra)

Puerperal Fever-(infection of the uterus after birth)

Indications

Chronic and Fetid Bronchitis Pulmonary TB (lung TB)

Leucorrhia (vaginal discharge)

Haemorrhage (intestinal-pulmonary-uterine-haemophilia-nose bleeds)

Oliguria (diuretic like effect)

Rheumatism (painful body)

Flatulence

Epilepsy

Phosphorus Antidote

External Uses For Terebinth-Turpentine-

Parasiticide

Revulsive (counter irritant or antidotal)

Rheumatism-Gout-Neuralgia-Sciatica

Scabies or Lice
Puerporal Infections (bleeding under the skin–purple spots)

Internal Uses for Terebinth–Turpentine

Indications

Dropsy (excess water retention of organs or tissue)

Spasms (Colitis-whopping Cough)

Migraine

Chronic Constipation

External Uses For Terebinth-Turpentine-

Analgesic

Antiseptic

USES

Atonic wounds (a slow healing wound or a damaged or weakened muscle-Sores and Gangrenous wounds

Leucorrhea

References


