### Please read my **Disclaimer**

These notes from other sources were compiled for my reference. Please consult your doctor before self-treatment.

### Willow – Salix

Background Side effects and Contraindications Benefits of Willow Bark Tea Testimonies Preparation Other Uses

# **Background**

Gongfu Master Mu Yuchun extolled the benefits of using Willow wands for exercise in <u>https://www.youtube.com/watch?v=XMLnCOeD1ns</u>. My research suggested that Willow Bark was widely used in Western and Chinese herbal medicine and in other cultures as an antiinflammatory painkiller. I had muscular aches and pain for more than a year made worse by tree pollen allergy. I took one dose of willow bark tea (WBT) one April evening and woke up pain free the next day. It only seemed to clear muscular aches and pain, not pain from bruised bones and strained ligaments. Although it reduced lower back pain, the stiffness remained. Also, it checked the burning discharge from the eyes and nose caused by pollen and I did not feel short of breath during and after a coughing fit. But, I felt very drowsy and still had some crusting in the eyes and nostrils.

The properties of WBT are well documented by herbalists

(eg <u>https://rjwhelan.co.nz/herbs%20A-Z/willow.html</u> – but most NHS clinicians seem unaware of it even though pharmacologists have been investigating which constituents and their effects are responsible for various benefits. A review published in February 2021 in Frontiers of Pharmacology concluded that the constituents of willow *confirm the traditional use of willow extracts in folk medicine*.

<u>https://www.frontiersin.org/articles/10.3389/fphar.2021.593856/full</u> Willow bark extract is used pharmaceutically and has shown dose dependent cytotoxic effects against human colon and lung cancer. Even the common goat willow (S Caprea grown as S Kilmarnock) has been researched for their medicinal properties.

Some species of Willow are illustrated here <u>https://8billiontrees.com/trees/willow-tree/</u>. The bark of a few types is illustrated here: <u>http://wildfoodsandmedicines.com/willow/</u> (you need to paste link into browser).

## Side Effects and contraindications

Generally regarded as safe but Some people are allergic to WBT, which also thins the blood and lowers blood sugar

The Healing Crisis – The Herxheimer Effect https://en.wikipedia.org/wiki/Jarisch%E2%80%93Herxheimer\_reaction

The Herxheimer EffectThis refers to a range of symptoms (headache, diarrhoea, vomiting,<br/>sweating etc.) which occur when pathogens are killed by antibiotics and<br/>other treatments, including bicarbonate of soda. For example, Vernon<br/>Johnson experienced these when he bumped up the pH to kill his<br/>prostate cancer. It is best to ease off the treatment to reduce the rate of<br/>die-off and toxic load on the body.

As herbalist Richard Whelan notes herbs should be prescribed according to the patients' constitutional type. The Chinese and Indian systems of medicine also believe that one person's medicine can aggravate medical problems in some others. In these traditions medicine is person- rather than disease-centred. <u>Constitutional Complexity 1.1.pdf (rjwhelan.co.nz)</u>

Not tested for Bleeding disorders	Pregnant and breastfeeding women should not take WBT. Children and teenagers could develop Reye syndrome linked to aspirin use. WBT is a blood thinner. So, - Stop WBT 2 weeks before surgery since it will increase the bleeding.
	- Do not take if taking blood thinning medication.
Drug interactions	WBT can affect the uptake of other drugs like acetazolamide (Diamox). Do not take if on anti-coagulants like Warfarin. Check with GP. <u>WILLOW BARK: Overview, Uses, Side Effects, Precautions, Interactions,</u> <u>Dosing and Reviews (webmd.com)</u>
Other cautions	<ul> <li>Willow Bark Uses, Benefits &amp; Side Effects - Drugs.com Herbal Database</li> <li>Lists risk factors, symptoms of unsuitability and when to seek medical</li> <li>aid. Don't take WBT if you are taking an anti-inflammatory drug, like</li> <li>non-steroidal anti-inflammatory drugs (NSAIDs), aspirin, ibuprofen</li> <li>(Advil), or naproxen (Naprosyn) or if you are taking drugs for diabetes.</li> <li>This site also lists 6 items of food rich in salicylates which you may be</li> <li>sensitive to.</li> <li>But, Adverse effects appear to be minimal as compared to non-</li> <li>steroidal anti-inflammatory drugs including aspirin. The primary</li> <li>cause for concern may relate to allergic reactions in salicylate-</li> <li>sensitive individuals. Efficacy and Safety of White Willow Bark (Salix</li> <li>alba) Extracts - PubMed (nih.gov)</li> </ul>

### **Benefits of WBT**

Research tends to be focused on specific species and the conclusions may not ally to all species. Salix leaves mainly contain flavonoids, phenolic acids, their derivatives, and phenolic glycosides, while stem bark mainly contains procyanidins. https://www.frontiersin.org/articles/10.3389/fphar.2021.593856/full

**NOTE:** Research suggests that WBT does not resolve psychogenic pain, such as gastrointestinal and chest pain due to emotions.

 analgesic (pain killer)
 Source of aspirin; does not have the side-effects of aspirin. Many people said that WBT was the only thing which eased pain caused by various medical issues. See comments
 https://reviews.webmd.com/vitamins-supplements/ingredientreview-955-willow-bark?drugid=955&drugname=WILLOW-BARK
 Also Willow bark extract (Salicis cortex) for gonarthrosis and coxarthrosis--results of a cohort study with a control group - PubMed (nih.gov) – WBT is better tolerated but can take a few (6?) weeks to be fully effective in reducing pain in the knee and hip.
 Willow bark poultice has also been used to relieve pain, and heal wounds and burns.

anti-bacterial , anti-microbial, antiseptic	Salix alba L. bark extract demonstrated antimicrobial activity against the dental biofilm forming bacteria. It has potent antimicrobial properties against Gram-negative bacteria (E. coli, Salmonella enterica) with a comparable activities to thiamphenicol (The broad spectrum antibiotic Its effects cover Gram-positive bacteria such as S. aureus.
anti-cancer	Scientists discover anti-cancer compound in the humble willow (news- medical.net) Ethanol and water extracts are most useful.
	2007: <u>Willow bark extract (BNO1455) and its fractions suppress growth</u> and induce apoptosis in human colon and lung cancer cells - PubMed (nih.gov)
	Willow Bark   Memorial Sloan Kettering Cancer Center (mskcc.org) – good source.
	Even the willow leaves are anti-cancerous and antileukemic - <u>Willow</u> <u>leaves' extracts contain anti-tumor agents effective against three cell</u> <u>types - PubMed (nih.gov)</u> and anti-cancerous in breast, liver and colon cancers <u>https://pubmed.ncbi.nlm.nih.gov/32766303/</u>
anti-HIV, anti-viral	Thought to be a good candidate for AIDS patients.
anti-fungal	This is dose dependent but use of willow water for rooting (see below) cuttings relies on its anti-fungal and anti-bacterial properties.
anti-inflammatory	Some species help non-resolving inflammation. <u>Richard Whelan ~</u> <u>Medical Herbalist ~ Willow (rjwhelan.co.nz)</u> used ground willow bark with turmeric and other herbs, including celery seed.
anti-cholesterol , anti-obesity and anti-lipidemic	Remarkable outcomes.
anti-oxidant	Associated with inflammatory diseases
antiplatelet	WBT thins the blood and hence the use of aspirin for preventing strokes. <i>The aspirin story – from willow to wonder drug</i> <u>https://onlinelibrary.wiley.com/doi/10.1111/bjh.14520</u>
antipyretic	Good for fevers
astringent	Willow bark is an important bitter tonic with marked astringent properties, making it useful in chronic hypersecretory states, such as mucus discharges, passive hemorrhage, leucorrhea, humid asthma, diarrhea and dysentery. (PDF) Effects of Willow Bark (Salix alba) and It Salicylates on Blood Coagulant (researchgate.net)
anthelmintic	Expels parasitic worms – has vetenary use.
Gum and tooth infections	Rinse frequently with decoction.
hepatoprotective	Through various actions on the liver
neuroprotective	Laboratory tests with some types of Salix have shown reduction in sciatic pain by affecting the central nervous system, esp on the sciatic nerve and brain stem.
Nootropics ( <u>substances</u> which improve cognitive function)	<u>White Willow Bark: A Way Better Aspirin &amp; Possible <b>Nootropic</b> :</u> r/NooTopics (reddit.com)
Warts, calluses, bunions and corns	Healing eased by salicylates in Salix.

#### Preparations

# How to Make Willow Bark Aspirin (practicalselfreliance.com)

She has a section on Foraging		
Leaves and Twiggy Stems	These have also been chewed for pain relief when out in the wild but WBT seems to be used for pain relief. Willow leaf tea is pleasant and beneficial.	
BARK	As with leaves, you use them fresh, dried or macerated in alcohol or vinegar. The content of bark phytochemicals is known to vary due to season, environment and species.	
Choosing the bark	Young pliable growth with yellowish green bark is recommended but I have also used bark from stems cut for massage. See <u>How to Harvest</u> Willow Bark for Medicine - Superfood Journal	
Peeling the bark	The bark of young branches peel away like a banana skin. Score the bark slightly and the bark should lift off and can be peeled.	
Drying the bark	Although the salicin is stable, other constituents may deteriorate with heat. So, use gentle heat to dry. I found that WBT made with fresh bark was bitter but that made with dried bark was a different colour and was not bitter.	
Break it up	This will increase the surface area	
<b>Making the tea</b> (methods vary)	The tea is bitter but not unpalatable when made with fresh bark. But, it is quite bland when made with dried bark. You could make:	
	<ul> <li>An infusion, pouring boiling water onto the herb (see below)</li> <li>A tea by boiling for a variable amount of time, preferably after soaking dried bark and also letting the tea stand for a while.</li> <li>Decoctions are boiled for longer – I am unsure if this will extract the tannins as well.</li> </ul>	
Dosage	The dosage makes a substance therapeutic or toxic. Also, dosage has to be adjusted to one's constitutional type. So, start with a low dose in case of allergy. Some people only use half teaspoon infusion in a cup of water which is left to stand for 15 mins or so https://superfoodjournal.com/how-use-willow-bark/. Others recommend boiling for up to 10 mins and letting the decoction stand for 30 mins before drinking (this is what I did). A friend then poured cold water on the already boiled bark and let it steep overnight for her next dose. See also <u>How to Use Willow Bark for Medicine + Dosage Amounts - Superfood Journal</u>	
Willow bark poultice	Mash up the boiled bark and bandage it over bruises, burns and wounds. <u>http://wildfoodsandmedicines.com/willow/</u>	
Willow bark oil/salve	https://moderndayclairefraser.wordpress.com/2014/09/16/willow-bark- salve/	
Freeze drying	Finnish researchers used water extracts from freeze-dried bark. Frontiers <u>  Salix spp. Bark Hot Water Extracts Show Antiviral, Antibacterial, and</u> <u>Antioxidant Activities—The Bioactive Properties of 16 Clones</u> (frontiersin.org)	
Capsules & Tinctures	To avoid bitter taste and for convenience.	
Willow Bach flower remedy	To bounce back from a difficult situation and get on with your life. <u>The</u> <u>Willow Bach Flower Remedy: An In-Depth Look – Mindful Remedies</u>	

Willow bark wash	For external complaints ulcers, burns, fungal infections or tonsillitis <u>Richard Whelan ~ Medical Herbalist ~ Willow (rjwhelan.co.nz)</u>
	Pour 1 litre cold water over 1oz bark and leave to soak overnight. Then bring the contents to a gentle boil for 5 mins without covering. Then cover and let it cool. Once cooled, strain and store in fridge – it can be used for 5 days. Use as stipulated.

## Miscellaneous

Massage	<ul> <li>Gongfu Master Mu Yuchun recommends the use of Willow for massaging the body and for some forms of exercise. He says the wood is soft and has vital energy which is imparted through warmth generated by friction (2.5 mins into <u>Willow magic wand. Mu</u> <u>Yuchun. Stroke prevention YouTube</u> Some excellent exercises:</li> <li><u>A magic wand for youth. Lesson 1. Mu Yuchun. Joints, neck, elbows YouTube</u></li> <li><u>A magic wand if you want to feel young. Lesson 2. Mu Yuchun YouTube</u></li> </ul>
Rooting hormone	https://deepgreenpermaculture.com/2010/12/15/home-made- plant-rooting-hormone-willow-water/ - a good source North American Indians used salicin-rich WBT to propagate plants. https://nerdymillennial.com/willow-tea-natural-root-growth- hormone-for-permaculture-gardeners/
Garden structures, willow baskets, for binding etc. Biofuel and biochar	https://www.youtube.com/watch?v=hjsNg83QAn0
Folklore	The power of the willow tree (whitedragon.org.uk)
Guanyin	The Buddhist Goddess of Mercy is depicted as using a willow sprig to sprinkle blessings and healing water. <u>https://www.exoticindiaart.com/product/paintings/kuan-yin-</u> <u>wc13/#mz-expanded-view-791631821735</u>

In love and light Mahes Visvalingam – version 1 17 Apr 2023. Last revised 26 May 2023