

Toxicity of Wood and its Dust

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Toxicity of wood and its Dust

- ***“Not to omit any one of them, the yew is similar to these other trees in general appearance . . . It is an ascertained fact that travellers’ vessels, made in Gaul of this wood, for the purpose of holding wine, have caused the death of those who used them.”***
- –Pliny the Elder, from *Naturalis Historia*, ca. 77 AD

The level of irritation is proportional to the exposure time to, and concentration of, wood dust. ... Long term effects of exposure to wood dust can include developing an allergic reaction to the dust or possibly nasal cancer.

- **Health effects can be as a skin irritant (causing a rash), asthma, eye irritation, cardiac arrest, respiratory irritation...**

Type	Reaction	Site	Potency	Source	Incidence
Bald Cypress	Sensitizer	Respiratory	+	Dust	Rare
Balsam Fir	Sensitizer	Eyes, skin	+	Leaves, bark	Common
Beech	Sensitizer, nasopharyngeal cancer	Eyes, skin, respiratory	++	Leaves, bark; dust	Common
Birch	Sensitizer	Respiratory	++	Wood, dust	Common
Black Locust	Irritant, nausea	Eyes, skin	+++	Leaves, bark	Common
Blackwood	Sensitizer	Eyes, skin	++	Dust, wood	Common
Boxwood	Sensitizer	Eyes, skin	++	Dust, wood	Common
Cashew	Sensitizer	Eyes, skin	+	Dust, wood	Rare
Cocobolo	Irritant, sensitizer	Eyes, skin, respiratory	+++	Dust, wood	Common
Dahoma	Irritant	Eyes, skin	++	Dust, wood	Common
Ebony	Irritant, sensitizer	Eyes, skin	++	Dust, wood	Common
Elm	Irritant	Eyes, skin	+	Dust	Rare
Goncalo aves	Sensitizer	Eyes, skin	++	Dust, wood	Rare
Greenheart (Surinam)	Sensitizer	Eyes, skin	+++	Dust, wood	Common
Hemlock	Nasopharyngeal cancer	Respiratory	?	Dust	Unknown
Iroko	Irritant, sensitizer, pneumonia	Eyes, skin, respiratory	+++	Dust, wood	Common
Mahogany (Swietenia)	Sensitizer, pneumonia	Skin, respiratory	+	Dust	Unknown
Mansonia	Irritant, sensitizer, nausea	Eyes, skin	+++	Dust, wood	Common

Maple (C. Corticale mold)	Sensitizer, pneumonia	Respiratory	+++	Dust	Common
Mimosa	Nausea		?	Leaves, bark	Unknown
Myrtle	Sensitizer	Respiratory	++	Leaves, bark; dust	Common
Oak	Sensitizer, nasopharyngeal cancer	Eyes, skin	++, ?	Leaves, bark; dust	Rare, unknown
Obeche	Irritant, sensitizer	Eyes, skin, respiratory	+++	Dust, wood	Common
Oleander	Direct toxin, nausea	Cardiac	++++	Dust, wood, leaves, bark	Common
Olivewood	Irritant, sensitizer	Eyes, skin, respiratory	+++	Dust, wood	Common
Opepe	Sensitizer	Respiratory	+	Dust	Rare

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<u>Padauk</u>	Sensitizer, nausea	Eyes, skin	+	Dust, wood	Rare
<u>Pau ferro</u>	Sensitizer	Eyes, skin	+	Dust, wood	Rare
<u>Peroba rosa</u>	Irritant, nausea	Respiratory	++	Dust, wood	Unknown
<u>Purpleheart</u>	Nausea		++	Dust, wood	Common
<u>Quebracho</u>	Irritant, nasopharyngeal cancer, nausea	Respiratory	++, ?	Dust, leaves, bark	Common, unknown
Redwood	Sensitizer, nasopharyngeal cancer, pneumonia	Skin, eyes, respiratory	++, ?	Dust	Rare, unknown
Rosewoods	Irritant, sensitizer	Skin, eyes, respiratory	++++	Dust, wood	Common
Satinwood	Irritant	Skin, eyes, respiratory	+++	Dust, wood	Common
Sassafras	Sensitizer, nasopharyngeal cancer, direct toxin, nausea	Respiratory	+, ?	Dust, wood, leaves, bark	Rare, unknown
Sequoia	Irritant	Respiratory	+	Dust	Rare
<u>Snakewood</u>	Irritant	Respiratory	++	Dust, wood	Rare
Spruce	Sensitizer	Respiratory	+	Dust, wood	Rare
Walnut, Black	Sensitizer	Skin, eyes	++	Dust	Common
<u>Wenge</u>	Sensitizer	Skin, eyes, respiratory	++	Dust, wood	Common
Western red cedar	Sensitizer	Respiratory	+++	Dust, leaves, bark	Common
Willow	Sensitizer, nausea	Respiratory	+	Dust, wood, leaves, bark	Unknown
Teak	Sensitizer, pneumonia	Skin, eyes, respiratory	++	Dust	Common
Yew	Irritant, direct toxin, nausea	Skin, eyes, cardiac	++,++++	Dust, wood	Common
Zebrawood	Sensitizer	Skin, eyes	++	Dust, wood	Rare

Note general absence of fruit
woods though their dust should
still be of concern

Takeaways

- All wood dust exposure is of concern to varying degrees
- Unique chemistry of some wood can cause toxic response
- Everyone has their own allergic response; sensitivity can change over time with continued exposure
- The dose makes the poison

