Wood: the other danger in your shop

Just because you use a blade guard doesn't mean you're safe from the hazards of woodworking

FINISHING

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Unless you've read or were told about the actual danger in some woods, chances are you probably never gave it one thought. Well, you're certainly not alone because a good number of woodworkers don't know about the dangers that do exist.

Most woodworkers only find out about the toxins, irritants and sensitizers in many woods after they, or someone they know, has a minor or major reaction while handling or working with certain species of woods.

Adverse effects may occur the first time you work with a certain wood; in other cases the reaction may not occur until after prolonged exposure. The reaction could be very subtle, and you may not even be aware of the reaction happening. In some cases the body will build up its own defenses and the reactions are not as severe. In other cases, it might be a fast build up or a slow accumulation of toxins that will exceed the body's threshold. Some woodworkers might work with woods and never have any reactions, while others may have a reaction from just touching the same species of wood for the first time. Reactions can happen from inhaling the sawdust or from the sawdust settling on your skin.

Sawdust from hardwoods, especially the exotic species, contain sensitizers and can cause acute allergic skin reactions, eye inflammation, hay fever, asthma, coughing and respiratory diseases. Highly toxic species include the giant sequoia, hemlock, yews, cypress, cork oak and other oaks, beech, rosewoods, some maples, redwoods and western red cedar.

Softwoods do not cause a high frequency of skin or respiratory problems, although there are some individuals who will develop allergic reactions. The causes for these different reactions may be coming from the wood itself, the sawdust, leaves or the bark from the trees. Additional care must be taken when the sap is present in green woods, as it can cause skin allergies and irritations from direct contact.

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Possible reactions

The minor or major reactions to certain woods can include pneumonitis alveolotis (hypersensitivity pneumonia); permanent scarring of the lungs (fibrosis), salivation, thirst, giddiness, nausea, dizziness, irregular heartbeats, skin rashes, eye and respiratory system problems, cardiac conditions and malaise. Test and studies are still "ongoing," linking wood dust with nasal cancer and many other negative health conditions.

The chart that accompanies this column shows some woods that have toxins, sensitizers and irritants. This list is not intended to stop you from using any of these species of woods; it is only to inform you of the risk of working these woods so you can take the proper precautions.

Caution and care must also be taken when working with plywood, composition board or other materials that contain chemicals like urea-formaldehyde, phenol-formaldehyde resin glues, and wood preservatives like the CCA (chromate/copper/arsenate), creosote, zinc, copper napthenate and other chemically treated woods, including the interior and exterior fire-retardant treated woods.

Preventive steps

Being aware of the potential dangers in the woods and taking the steps toward reducing your risks should be your final goal to good health. It all starts with learning to respect the woods you work with, and then always wearing personal protective gear.

Start with a head covering, like a soft baseball cap, protective glasses or goggles, or a clear facemask. Be sure to use a good dust mask or a respirator that has been approved by the National Institute for Occupational Safety and Health. You should wear a work jacket or shop coat to protect your body and arms, and a pair of gloves to protect your hands. A good dust collection system suited for your workshop can be an important investment toward your good health. Your protective gear should be worn whenever you are emptying the sawdust from your saws, sanders, lathes, joiners and collectors. Finally, always wash your hands after working with or handling any wood.

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Wood	Reaction	Site	Potency	Source	Incidence
Bald Cypress	S	R	1	D	R
Balsam Fir	S	E, S	1	LB	C
Beech	S, C	E, S, R	2	LB, D	C
Birch	S	R	2	W, D	C
Black Locust	I, N	E, S	3	LB	C
Blackwood	S	E, S	2	W, D	C
Boxwood	S	E, S	2	W, D	C
Cashew	S	E, S	1	W, D	R
Cocobolo	I, S	E, S, R	3	W, D	C
Dahoma	I	E, S	2	W, D	C
Ebony	I, S	E, S	2	W, D	C
Elm	I	E, S	1	D	R
Goncalo Alves	S	E, S	2	W, D	R
Greenheart	S	E, S	3	W, D	C
Hemlock	C	R		D	U
Iroko	I, S, P	E, S, R	3	W, D	C
Mahogany	S, P	S, R	1	D	U
Mansonia	I, S N	E, S	3 1	W, D D	C
Maple (Spalted)	S, P	R	3	D	C
Mimosa	N			LB	U
Myrtle	S	R	2	LB, D	C
Oak	S	E, S	2	LB, D	R
	C			D	U
Obeche	I, S	E, S, R	3	W, D	C
Oleander	DT	N, C	4	D, W, LB	C
Olivewood	I, S	E, S, R	3	W, D	C
Opepe	S	R	1	D	R
Padauk	S	E, S, R	1	W, D	R
Pau Ferro	S	E, S	1	W, D	R
Peroba Rosa	I	R, N	2	W, D	U
Purpleheart		N	2	W, D	C
Quebracho	I C	R, N	2	LB, D D	C U
Redwood	S, P C	E, S, R	2	D D	R U
Rosewoods	I, S	E, S, R	4	W, D	U
Satinwood	I	E, S, R	3	W, D	C
Sassafras	S DT C	R N	1 1	D D, W, LB D	C R U
Sequoia	I	R	1	D	R
Snakewood	I	R	2	W, D	R
Spruce	S	R	1	W, D	R
Walnut, Black	S	E, S	2	W, D	C
Wenge	S	E, S, R	1	W, D	C
Willow	S	R, N	1	D, W, LB	U
West. Red Cedar	S	R	3	D, LB	C
Teak	S, P	E, S, R	2	D	C
Yew	I DT	E,S N,C	2 4	D W,D	C C
Zebrawood	S	E, S	2	W, D	C

Key

Reaction
I - Irritants
S - Sensitizer
C - nasopharyngeal cancer
P - pheunomitis, alveolitis (hypersensitivity pneumonia)
DT - direction toxin
N - nausea, malaise

Site
S - Skin
E - Eyes
R - Respitory
C - Cardiac

Potency
1 = lowest potency
4 = highest potency

Source
D - Dust
LB - Leaves, Bark
W - Wood

Incidence
R - Rare
C - Common
U - Uncommon

Empty boxes
No data

Reference
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