

Today it's all about heart disease — heart disease in trees that is. Obviously, trees do not have hearts. Trees consist of a beautifully engineered material called wood, designed to combine strength and flexibility. Wood is classified as either sapwood or heartwood.

Sapwood is the living, outermost portion of a tree trunk or branch. All wood begins as sapwood. It is formed just beneath the bark by a thin layer of living cells known as the cambium. Cambium tissue has the exceptional ability to produce bark cells to the outside and wood cells to the inside. Tree stems increase in girth during each year of growth as new layers of wood cells are added. These are referred to as growth rings. In good growing years, this new layer of wood can be many cells thick; whereas, in poor years it may be relatively thin. As a tree ages, its trunk and branches increase in diameter. In time, the layers of sapwood nearest the center of the trunk die. They become heartwood. The non-living heartwood no longer conducts water but remains intact with its main purpose to give strength and support to the tree. Heartwood is usually darker in color than sapwood.

Heart disease in trees is caused by fungi invasions. Although there are many species of fungi which cause decay in living trees, most important are those fungi that cause heart decay, often called heart rot. These pathogens usually enter the tree as a result of injury. Such points of entry may come from broken branches caused by wind, fire, lightning, and even from improper pruning by us humans. Once inside the tree, fungi cause decay. Interestingly, heart rot fungi do not invade living wood of healthy trees.

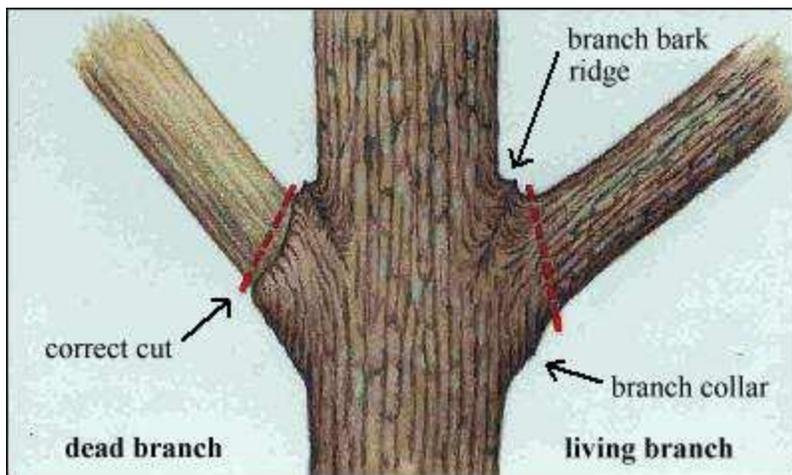


Detecting heart rot can be difficult. Since this type of decay takes place internally, it can remain out of sight for many years. Usually, in the latter stages of heart rot, mushrooms grow on the trunk or branch. This is one of the first visible signs that a fungal pathogen resides within the tree. Unfortunately, as decay progresses, the heartwood is destroyed; and the integrity of the tree's strength becomes a serious issue.

These external mushrooms are the fruiting

bodies of the fungi. They are generally called conks or bracket fungi. These visible conks produce spores. Spores become wind-borne, microscopic, seed-like structures. The wind carries spores to other susceptible trees thus perpetuating the life cycle of conks. These fungi appear bracket-like, attached to the tree and varying greatly in size, color and texture. Note: The visible presence of conks calls for investigation.

Eliminating or minimizing heart rot is accomplished by keeping one's tree healthy. When pruning branches, make cuts just outside the branch collar so proper



mending can take place. Shape trees at an early age, so major branch removal creates small wounds. Remove broken branch stubs immediately following storm damage. Have suspected heart rot trees checked by an arborist to determine if sufficient live wood is present for structural safety. Check

trees every few years to be certain new growth is maintaining sound structure.

I am certainly not a doomsday advocate, but I do know that large tree trunks and main branches revealing numerous conks are certain indications that little sound wood remains to support the tree.

After all, one doesn't want heart disease, more commonly called heart rot, in trees to cause the homeowner heartache when his or her tree comes tumbling down damaging, or possibly destroying, his or her home.