

## Pruning Young Trees for Structure Important but Overlooked

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Now is a good time to inspect young shade trees for structural pruning. Branches and needed pruning are easier to see on dormant trees without leaves. A good time to actually prune is late winter into spring.

Structural pruning is the most important reason to prune trees but tends to be overlooked. Failing to prune young trees allows structural issues more likely to fail in wind and ice storms to develop. Issues are easier to prevent than correct, making proactive pruning important.

Large, established trees are best pruned by professionals. Young trees might also be best pruned by professionals who understand how to train a tree. Hiring a professional to check a tree every few years for pruning needs is one of the best investments a homeowner can make in their landscape.

Pruning young trees for structure is not a once and be done task. During the first 5 to 20 years after planting, a small amount of pruning is needed every few years to do a good job of training a tree and to avoid large pruning wounds.

At planting, the only pruning needed is removal of dead or damaged branches. If a tree is of fairly decent size, this might be the time to remove a double leader. If removing a double leader removes more than 25 percent of a tree, then tip back the leader that will eventually be removed and wait one year to remove the rest of it. This helps maintain enough foliage for photosynthesis to establish roots.

If for some reason it is not possible to return to the tree for more than two or three years, then it is best to remove the double leader at planting. Co-dominant trunks are a common cause of tree failure and should always be avoided.

One thing not to prune at planting or over the next couple of years are the lowest branches on the trunk. Even though these may eventually be removed for head clearance, research has shown leaving them as long as possible leads to a stronger trunk and trunk taper.

A few years after a planting, depending on growth rate, is the time to begin structural pruning. The goals are good trunk and permanent branch development and strong branch attachments.

Good trunk development is allowing only one central leader to develop. It's also leaving the lower branches as long as possible and paying attention to branch size. Branches should be smaller in diameter than trunk diameter. Ideally, lateral branches are about 50 percent smaller than trunk diameter.

Permanent branch selection can take up to 15 years. Once the lowest permanent branch is selected, the goal for the remaining scaffold branches, usually about five to nine per tree, is good radial and vertical spacing and a strong attachment.

Radial spacing means branches will somewhat spiral around the tree. In other words, there will be branches growing in most directions off of the trunk to distribute weight. Closely parallel branches are best avoided.

Vertical spacing means no branches are growing close to one another at the point they attach to the trunk. The recommendation for large shade trees is branches are spaced 18 to 24 inches apart.

Branches with strong attachments are those that do not have too narrow of an angle where they attach to the trunk. These are the most likely to develop included bark, where bark tissue grows between the branch and the trunk. This is a weak attachment at higher risk of failure.

A good fact sheet on pruning young trees from the International Society of Arboriculture can be found at this link <https://go.unl.edu/pruningyoungtrees>.