

# **Certified Arborists and Tree Workers**

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## Help Trees Take Shape: Prune Properly

In search of a strong structure and a desirable form ... for your tree? If so, prune your trees when they are young. This will result in less need for corrective pruning as they mature. In fact, with a basic understanding of tree biology, homeowners can properly prune young trees, maintain tree health and structure, and enhance the aesthetic and economic values of their landscape, said Jim Skiera, Executive Director of the International Society of Arboriculture (ISA).

#### Why do people prune trees?

People commonly prune trees to remove dead branches, remove crowded or rubbing limbs, or to eliminate hazards. Trees also are pruned to increase light and air penetration to the inside of the tree's crown or to surrounding landscape. But in most cases, mature trees are pruned as a corrective or preventative measure. Since each cut has the potential to change the growth of the tree, no branch should be removed without a reason, Skiera said.

"Urban environments are not 'natural' conditions for trees, so trees usually have to be modified in some way," Skiera said. "But homeowners need to remember that heavy pruning can severely stress a tree. They need to exercise caution and a little common sense when they prune."

Removing foliage - the primary source of energy-producing sugar for trees - can reduce growth and stored energy reserves. Skiera said a good rule of thumb for pruning is to maintain at least half the foliage on branches in the lower two-thirds of a tree.

### **Pruning techniques**

There are specific types of pruning that help trees stay healthy, safe, and beautiful.

-- Cleaning removes dead, dying, diseased, crowded, weakly attached, and low-vigor branches from the crown of a tree.

-- **Thinning** selectively removes branches to increase light penetration and air movement through the crown and reduces weight on heavy limbs to retain the tree's natural shape.

-- Raising removes lower branches from a tree to clear space for buildings, vehicles, pedestrians, and views.

-- **Reduction** trims the height or spread of a tree by pruning back the leaders and branch terminals to lateral branches that are large enough to assume the terminal roles (at least one-third the diameter of the cut stem). Compared to topping, this helps maintain the form and structural integrity of the tree.

#### When to prune

Most routine pruning to remove weak, diseased, or dead limbs can be done at any time of the year. But growth is maximized and wound closure is fastest if pruning occurs before the spring growth flush - when trees have just expended a great deal of energy to produce foliage and early shoot growth.

Heavy pruning immediately after growth flush can stress the tree. Avoid pruning during active disease transmission periods. A few tree diseases, such as oak wilt, can be spread when pruning wounds allow spores to access a tree.

#### **Proper pruning cuts**

A pruning cut's location is critical to a tree's response in growth and wound closure. Pruning cuts should be made just outside the branch collar, which contains trunk or parent branch tissue that should not be damaged or removed. When removing a large limb, first reduce its weight to avoid tearing the bark make an undercut about 12-18 inches from the limb's point of attachment. Then make a second cut from the top, directly above or a few inches further out on the limb.

#### How much to prune

The amount to remove depends on the tree size, species, and age, as well as pruning objectives. Younger trees can tolerate more pruning than mature trees. Skiera says: "A tree can recover faster from several small pruning wounds than from one large wound." Removing just one, large-diameter limb can create a wound that the tree may not be able to close. The older and larger the tree, the less energy it has to close wounds and ward off decay or insects.

#### Hiring an arborist

Pruning large trees can be dangerous - it usually involves working above the ground and using power equipment. Ensure your safety, and that of your trees, by hiring a professional arborist.

The International Society of Arboriculture (ISA), headquartered in Champaign, IL, is a nonprofit organization supporting tree care research around the world. As part of ISA's dedication to the care and preservation of shade and ornamental trees, it offers the only internationally-recognized certification program in the industry. For more information, contact a local ISA Certified Arborist or visit www.isa-arbor.com.

Information courtesy of The International Society of Arboriculture (ISA) at www.treesaregood.com