Recognizing Tree Risk

Learn to identify common tree defects that may indicate tree risk and understand how tree risk can be managed.

Trees are an important part of our world and offer a wide range of benefits. However, trees can also be liabilities. While there is no such thing as a completely safe tree, the benefits of trees far outweigh the risks. All tree have the potential to fall, but only a small number actually hit something or someone.

By understanding and addressing the risks associated with trees, you can make your property safer and prolong the lives of your trees.

It is a tree owner's responsibility to ensure the safety of others when around trees on their property. This brochure provides some tips for identifying and managing common defects associated with tree risk. However, evaluating the seriousness of these defects is best done by a professional arborist. Regular tree care performed by an ISA Certified Arborist® will provide an opportunity to identify trees that have defects and unacceptable risk levels. Once the risk is identified, steps may be taken to reduce the likelihood of an incident or damage.

Tree Risk Checklist

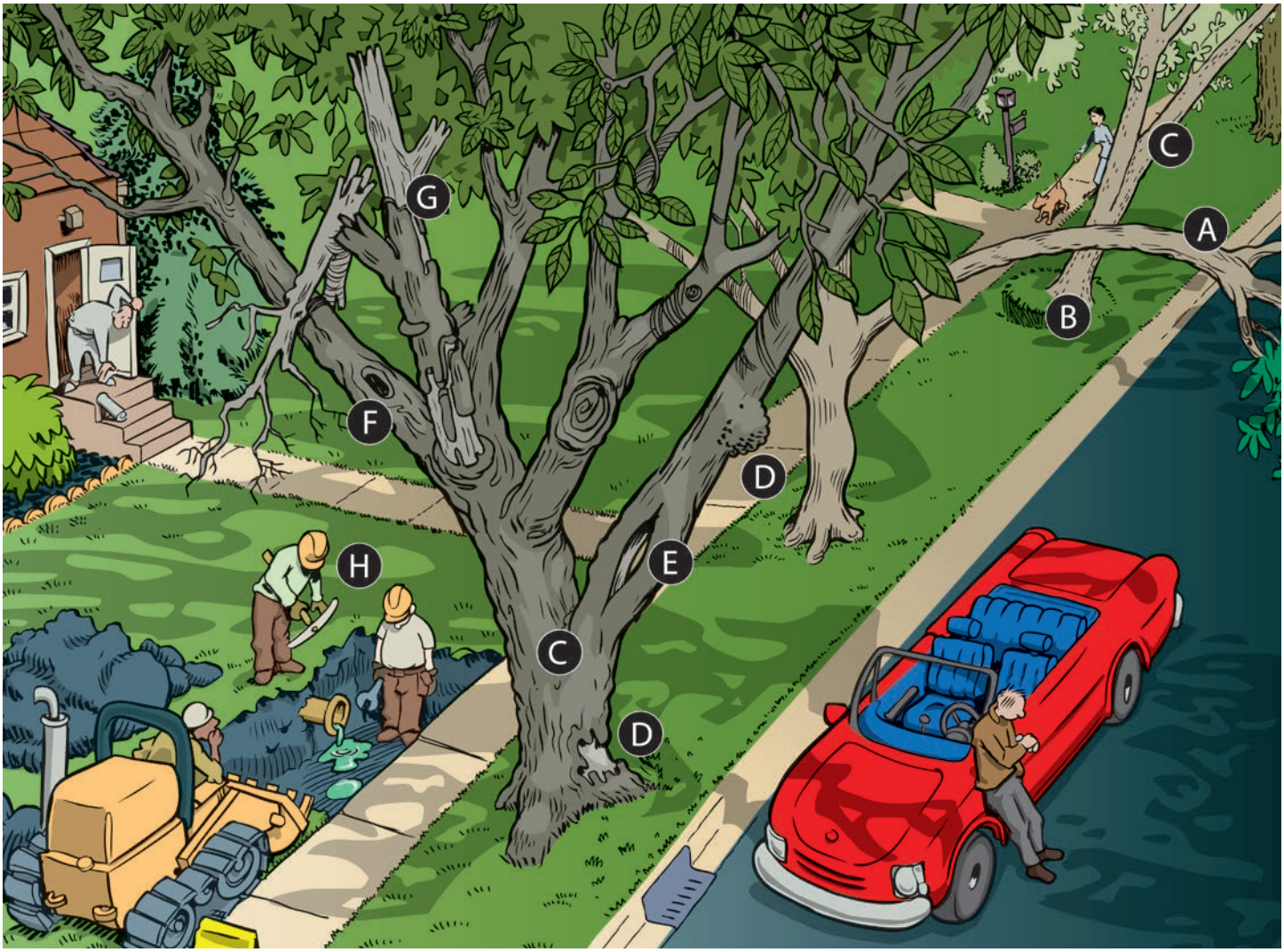
Consider these questions when assessing a tree:

- Are there large dead branches?
- Are there detached, hanging branches?
- Have any branches fallen from the tree?
- Is there loose bark on the trunk?
- Are there cracks or splits in the trunk or where branches are attached?
- Has the trunk developed unusually?
- Are there cavities or rotten wood along the trunk or in major branches?
- Are mushrooms present at the base of or under the tree?
- Has the area recently been altered by construction, changes in soil level, or installations of lawns or pavement?
- Have the leaves developed an unusual yellow color or do they seem smaller in size?
- Has the tree been topped or heavily pruned?

Trees and Utility Lines

Additional consequences can result from trees that fall onto utility lines. Not only can these trees injure people or property near the lines, but they can also hit a conductor and cause power outages or surges, fires, and other damage.

A tree with potential to fall into a utility line presents a very serious situation. Never attempt to remove branches or any tree part from or near power lines, and never go near downed power lines! These lines are especially dangerous, as they could still be conducting electricity. If you see tree parts in contact with utility lines, call your local electricity provider.



Defects in Urban Trees

The following are defects or signs of possible defects in urban trees (see figure):

A: Poor taper:
Branches or stems with their weight concentrated near the end are more prone to failure.

B: Root failure:
Cracks or separations in the soil may indicate soil heaving from excessive movement of the roots. This can be a warning sign for failure, especially if the tree is leaning.

C: Codominant stems (split trunk):
Can often be failure points. Multiple branch attachments at one point on a stem can also be considered a defect.

D: Externally visible defects:
Includes cankers and wounds. Each could be minor or the start of a significant problem; further investigation may be warranted.

E: Cracks or splits:
Watch for longitudinal cracks or splits on the trunk, major branches, or branch unions.

F: External signs of decay:
Asymmetric shapes may be caused by the tree's formation of reaction wood and may be an indication of an internal problem. Other, more obvious signs of decay include the presence of fungal fruiting bodies and cavities.

G: Dead branches:
Dead branches within the canopy of a tree are probably the most obvious potential hazards. The risk of damage or injury depends on the size of the dead branch and distance from any potential targets.

H: Human-caused defects:
Wounds, weak or damaged limbs, root loss, and decay may be the result of construction, grade changes, soil compaction, poor pruning, or other misguided practices.

Ensuring Quality Care

Trees are assets to your home and the community, and they deserve the best possible care. If you answered "yes" to any of the questions in the tree risk checklist onthe previous page or see any of the defects depicted in this brochure, your tree should be examined by an ISA Certified Arborist.

Managing Tree Risk

An ISA Certified Arborist can help homeowners manage trees and provide treatments that may help reduce the risk associated with certain trees.

An arborist familiar with tree risk assessment may suggest one or more of the following:

- Prune the tree and remove the defective branches. Inappropriate pruning may weaken the tree. Pruning work is best done by an ISA Certified Arborist.
- Cable and brace the tree. Provide physical support for weak branches and stems to increase their strength and stability. Such supports are not guarantees against failure.
- Provide routine care. Mature trees need routine care in the form of water, nutrients (in some cases), mulch, pruning, and, in some cases, nutrients, as dictated by their structure and the season.
- Remove the tree. Some trees with unacceptable levels of risk are best removed. If possible, plant an appropriate new tree as a replacement.

Recognizing and reducing tree risk not only increases the safety of your property and that of your neighbors, but also improves trees' health and may increase their longevity.

What Is a Certified Arborist?

ISA Certified Arborists® are individuals who have proven a level of knowledge in the art and science of tree care through experience and by passing a comprehensive examination developed by some of the nation's leading experts on tree care.
ISA Certified Arborists must also continue their education to maintain their certification. Therefore, they are more likely to be up to date on the latest techniques in arboriculture.

Finding an Arborist

Visit TreesAreGood.org for free tools:

- The "Find an Arborist" tool can help you locate an arborist in your area.
- The "Verify a Credential" tool enables you to confirm whether an arborist has an ISA credential.

Be an Informed Consumer

One of the best methods to use in choosing an arborist is to educate yourself about some of the basic principles of tree care. Visit TreesAreGood.org to read and download all brochures in this series.

www.isa-arbor.com • www.treesaregood.org

Through research, technology, and education, the International Society of Arboriculture promotes the professional practice of arboriculture and fosters a greater worldwide awareness of the benefits of trees.