

Walkways, Driveways, Patios and Roots

The roots of trees can lift concrete or pavement when the hard surface treatment is located too close to the trunk of a tree

When planting a tree, make sure to leave enough room for the trunk to grow. To avoid damaging your walkway, driveway or patio at least 1.5m (5ft.) is recommended. Beyond this distance tree roots are not the cause of any heaving and cracking.

Heaving and cracking of walkways, driveways or patios is usually caused by the expansion and contraction caused by the winter freeze thaw cycles.

Further north there might be only one freeze thaw cycle per winter. In Toronto our climate is particularly difficult. We can have a number of freeze thaw cycles in one winter.

After each freeze thaw cycle the cracks and the heaving get a little worse. This is all happening while the roots are quietly dormant underground until after the spring thaw when they start to grow again. The roots then grow into the additional growing space created by the cracking and heaving.

Please do not blame trees and their roots for breaking and clogging water or drain pipes, or damaging foundations or cracking and heaving walkways, driveways or patios.
They didn't do it!

Roots are **not** harmful. But trees **are** helpful.

Please ask us to plant a tree on your street

Call Urban Forestry at 416- 338- 8733

*Broken or clogged drain pipes?
Water coming through
the basement walls?
Cracked or heaving walkway
or driveway?*

***The problem is not
the roots!
Let's get to the
root of the problem!***



- ① The three most important things that roots need and want are: **soil, air and water**. The easiest and best place for them to find these three essentials is at the surface of the ground in your yard and your neighbour's yard.

That is why the roots of a tree, planted in good soil, will not grow deeper than 60cm to 90cm (2ft. to 3ft.) below the surface. The roots may extend out from the trunk as much as 3 times the length of the longest branch. Within this area you would find many tiny fibrous roots that are within the top 30cm (12") of soil. It is these tiny fibrous roots that take in the water, air and nutrients that nourish the tree.

- ② However if there is a broken drain or water pipe the roots will be attracted to the leak since it provides water and air. Without a break or leak there would be no water or air to attract the roots. The roots do not cause the breaks. They are only taking advantage of the break or leak caused by something else such as aging pipes or faulty joints.

- ③ The area where soil meets the foundation of a house can also provide a place where roots can find soil with a bit of air and water.

- ④ If there are cracks in the foundation water can collect there. This may attract roots. The cracks get bigger because of the freeze thaw cycles of our winters. Water expands when it freezes. The ice has the force capable of causing cracking and heaving of concrete.

Water and ice can do much damage which is why it is important to keep foundation walls waterproofed.

Roots are not capable of causing cracks or making existing cracks bigger. They are only taking advantage of the air, water and space left once the ice melts.

