

Transpiration

1 Transpiration generates a pulling force on the column of water in the xylem.

Leaf vein
Stoma

Cohesion and
adhesion
in the xylem

2 Cohesion of water molecules extends this pulling force all the way down to the roots.

Adhesion
Cohesion
Cell wall

Water uptake
from soil

Soil particle

Xylem

Root hair

Endodermis

3 Water in the soil is pulled into the roots.

