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## ***Juniper: Phytophthora root rot***

*Use Integrated Pest Management (IPM) for successful plant problem management.*

### ***Biology***

Phytophthora root rot is usually a problem only in areas with poor drainage or where flooding occurs. The fungus attacks the roots, which rot and die. The infection moves up into the crown, where the cambium (between the bark and the wood) turns reddish-brown or caramel in color instead of the normal creamy white. Cankers may develop near the base of older plants. The cankers are a dark reddish-brown when cut and may be accompanied by split bark and oozing pitch. Lower branches wilt and die back. Phytophthora infection spreads by water movement and contact with diseased plants or plant tissue. Foliar symptoms of Phytophthora root rot can be confused with Phomopsis twig blight and abiotic problems.

### ***Management Options***

#### **Non-Chemical Management**

- ~ Plant only disease-free materials.
- ~ Do not plant in waterlogged, poorly drained, or frequently flooded areas.
- ~ Improve soil drainage by incorporating organic material or using raised beds.
- ~ Avoid soil compaction, which reduces drainage. Construction, heavy foot traffic, or machinery can compact soil.
- ~ Remove and destroy all infected plants and plant debris.
- ~ Plant resistant plant species or varieties in infected areas. *Juniperus excelsa* var. *stricta* and *J. squamata* var. *meyeri* are resistant to both *Phytophthora cinnamomi* and *P. lateralis*.

*Select non-chemical management options as your first choice!*

#### **Chemical Management**

***IMPORTANT: Visit Home and Garden Fact Sheets for more information on using pesticides***

None recommended

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*Images*



~ *Caption: Phytophthora root rot on juniper*  
~ *Photo by: R.S. Byther*



~ *Caption: Phytophthora root rot infecting trunk*  
~ *Photo by: R.S. Byther*