

# Patterns of Allergen Cross-Reactivity

## Allergen Cross-Reactivity

**Allergen groups (species within the genus) listed below show strong cross-reactivity within the associated group. Using one member of the group for the allergy immunotherapy extract may be adequate to protect the patient against the entire group.**

### Weeds:

(*Ambrosia*)

Short ragweed  
Giant ragweed  
False ragweed  
Western ragweed

Southern and Slender ragweed do not cross-react as well as other ragweed species.

(*Artemisia*)

Sages  
Wormwood  
Mugworts

Strong cross-reactivity between *Artemisia* species

### *Chenopod and Amaranth families*

(*Salsola*)  
(*Chenopodium*)  
(*Kochia*)

Russian thistle  
Lambs quarter  
Burning bush

Skin testing suggests strong pollen cross-reactivity across chenopod and amaranth family boundaries. Predominant weed species in geographic region should be used.

(*Amaranthus*)

Pigweed  
Red root pigweed  
Amaranth

(*Atriplex*)

Saltbush  
Wingscale

Strong cross-reactivity between *Atriplex* species

**Dust Mites:** *D. pteronyssinus*  
*D. farinae*

*D. pteronyssinus* and *D. farinae* have allergens with extensive interspecific cross-reacting epitopes as well as unique allergens. Generally, considered individually, dosage modifications may be made if used in combination to account for this cross-reactivity

### Grasses:

**Subfamily *Festucoideae*,**

Meadow fescue  
Timothy  
Rye  
Kentucky blue  
Orchard  
Red top

Strong cross-reactivity between members of the *Festucoidea subfamily* but unique allergenicity of *Eragrostoideae* (Bermuda) & *Panicoideae subfamilies* (Bahia & Johnson)

### Trees:

(*Cupressaceae*)

Juniper  
Cedar  
Cypress

*Cupressaceae* family: strong evidence for cross-reactivity between members of this family. One member of this family should be adequate.

(*Betulaceae*)

Birch  
Alder  
Hazel  
Hornbeam  
Hophornbeam

*Betulaceae* and *Fagales* families have extensive cross-reactivity. The use of one of the locally prevalent members should be adequate.

(*Fagaceae*)

Beech  
Oak  
Chestnut

(*Oleaceae*)

Ash  
European olive  
Privet

(*Populus*)

Cottonwood  
Poplar  
Aspen

*Oleacea* family: Strong cross-reactivity between the *Fraxinus* (ash) and *Olea* (olive) species

### Cockroach:

German cockroach  
American cockroach

Although, German cockroaches are most likely to occur in American homes, an equal mixture of German and American cockroach is appropriate