

Conservation and Environment Guidelines

Potentially harmful garden plants

Risks and responsibilities

In recent years there has been an increase in media attention to the subject of potentially harmful garden plants. Fortunately, incidents of serious poisoning by plants are rare in the United Kingdom, and deaths very infrequent. These mostly involve adults who have either mistaken a poisonous plant for an edible one or misjudged the dose of a “herbal remedy”. The toxic constituents of some poisonous plants are invaluable medicinal drugs when administered at a low dosage under proper supervision. However, they can be fatal if misused and it is important that possible risks are understood. It is also important that the subject is seen in proper perspective, to avoid unnecessary alarm and the spoiling of enjoyment of gardens and gardening.

It is reasonable to expect individuals always to exercise proper responsibility for their own safety and that of children and pets in their charge within the house and garden environment. At the same time gardeners should take care to prevent exposure to high risk.



Photo: Steven Wooster

Most garden plants are quite harmless

Where's the harm?

Many plants, or parts of them such as fruits and seeds, are safe and good to eat and recognized as food plants. Most others found in the garden as ornamental plants or weeds are not dangerous. Some may cause a digestive upset and discomfort if eaten, as will unripe fruit or raw rhubarb, whilst a very few garden plants are more hazardous and could

cause severe poisoning. Many of the plants to be avoided are already well known to be potentially hazardous. Some have an unpleasant taste which reduces the likelihood of a dangerous quantity being eaten, whilst others just do not look edible.

Nibbling plants is mainly a hazard of childhood, so small children may be vulnerable until they can be taught not to eat any part of a growing plant.



Arum lily (*Zantedeschia aethiopica*)

A sensible rule is: If it isn't recognized food, don't eat it. Make sure children know this.

As well as the danger of poisoning through eating plants, there is also the possibility of suffering an irritant or allergic reaction through contact with a plant or its sap. Gardeners are perhaps more at risk of these effects, for example while weeding or pruning. There are three main types of contact hazard:

i) Irritant sap may cause a burning sensation and sometimes blistering of the skin; anyone can be affected if the exposure is sufficient.

ii) Some plants contain chemicals called allergens. These do not affect everyone, but some individuals may acquire a sensitivity to them resulting in an allergic reaction. This is often a form of dermatitis but may in rare

cases be more far-reaching, as with nut allergies.

iii) A very small number of plants have sap which renders the skin excessively sensitive to strong sunlight. Contact with a plant followed by exposure to sunlight results in very severe localized sunburn with blistering and a long-lasting skin discolouration.

Farm animals are more likely to be exposed to the danger of poisoning than domestic animals, but puppies especially are notoriously adventurous. Never leave hedge clippings or uprooted plants in reach of pets or farm animals; in many cases the withered condition adds to the risk of poisoning. Most animals seem to know to avoid growing plants that could harm them but parts of plants, or dead and shrivelled specimens, are often not recognised.

Purchase plants wisely

The Horticultural Trades Association has issued a Code of Recommended Retail Practice relating to the labelling of potentially harmful plants. This is based on research carried out by a project group consisting of representatives of the Medical Toxicology Unit, Guy's and St Thomas' Hospital Trust, the Royal Botanic Gardens Kew and the Royal

Horticultural Society. It is a voluntary Code produced to address public concern and sets out guidelines for keeping customers informed of potentially harmful plants at the point of purchase. This is part of the broader responsibility of all concerned with the sale and display of plants to provide good advice on the subject.

What to do when poisoning is suspected

If you think a child or adult has eaten part of a doubtful plant seek medical advice at once from a hospital Accident and Emergency Department. If you think an animal has eaten a poisonous plant seek veterinary advice at once. In all cases take along samples of the plant concerned. Don't panic, and do not attempt to make the subject vomit. In cases of irritant or allergic dermatitis severe enough to require medical attention, again provide a sample of the plant or plants suspected to be the cause.

Some useful references

- COOPER, M.R. & JOHNSON, A.W. (1998) *Poisonous Plants and Fungi in Britain: Animal and Human Poisoning*. London, The Stationery Office
- FROHNE, D. & PFÄNDER, H.J. (1984) *A Colour Atlas of Poisonous Plants: a handbook for pharmacists, doctors, toxicologists and biologists*. London, Wolfe Scientific Ltd
- ROYAL BOTANIC GARDENS, KEW & MEDICAL TOXICOLOGY UNIT, GUYS & ST THOMAS' HOSPITAL TRUST (2000) *Poisonous Plants and Fungi in Britain and Ireland* An identification system on CD-ROM



Yew (*Taxus baccata*)

Plants to recognize

Here is a list of plants which are often found in gardens, or available for sale. It describes three types of potential risk.

External effects as

i) **Skin irritants**

ii) **Eye irritants**

Internal effects as

iii) **Poisons**

The poisons category includes plants known to present any level of hazard. When eaten, some may cause mild illness, while a very few may cause severe poisoning. The correct approach is to avoid eating any plants listed as poisonous.

Acalypha (chenille plant, copperleaf):

skin & eye irritant; poisonous

Aconitum (monkshood): **poisonous;**

irritant to and via the skin

Actaea section *Actaea* (baneberry):

poisonous; skin irritant

Aesculus (horse chestnut): **poisonous**

Aglaonema (Chinese evergreen):

poisonous; skin & eye irritant

Agrostemma githago (corncockle):

poisonous

alder buckthorn: See *Rhamnus*

Allamanda: **poisonous; skin & eye**

irritant

Alocasia (taro): **poisonous; skin &**

eye irritant

Aloe: **poisonous**

Alstroemeria (Peruvian lily): **skin**

irritant

amaryllis: See *Hippeastrum*

Amaryllis belladonna (belladonna lily):

poisonous

angel's trumpet: See *Brugmansia*

Anthurium (flamingo flower):

poisonous; skin & eye irritant

Arisaema (cobra-lily): **poisonous;**

skin & eye irritant

Arum (cuckoo-pint, lords-and-ladies):

poisonous; skin & eye irritant

Asparagus (asparagus fern): **may**

cause skin allergy; fruits

poisonous

Atropa (deadly nightshade):

poisonous; skin irritant

bluebell: See *Hyacinthoides*

Brugmansia (angel's trumpet):

poisonous

Brunfelsia (yesterday, today and

tomorrow): **poisonous**

buckthorn: See *Rhamnus*

bunny ears cactus: See *Opuntia*

burning bush: See *Dictamnus*

Caladium (angel's wings): **poisonous**

calla lily: See *Zantedeschia*

Calla palustris (water arum):

poisonous; skin & eye irritant

Capsicum annum (ornamental

pepper): **skin & eye irritant;**

poisonous

castor oil plant: See *Ricinus*

Chelidonium majus (greater

celandine): **poisonous; skin & eye**

irritant

chenille plant: See *Acalypha*

cherry laurel: See *Prunus laurocerasus*

chinchinchee: See *Ornithogalum*

Chinese evergreen: See *Aglaonema*

Christmas cherry: See *Solanum*

Chrysanthemum: **skin irritant**

Colchicum (autumn crocus):

poisonous

comfrey, Russian comfrey: See

Symphytum

Convallaria majalis (lily-of-the-

valley): **poisonous**

corncockle: See *Agrostemma*

× *Cupressocyparis leylandii* (Leyland

cypress): **skin irritant**

daffodil: See *Narcissus*

Daphne (mezereon, spurge laurel):

poisonous; skin irritant

Datura (thornapple): **poisonous; skin irritant**

Delphinium (including *Consolida*)

(larkspur): **poisonous**

Dictamnus (burning bush): **skin**

irritant

Dieffenbachia (dumb cane, leopard

lily): **poisonous; skin & eye irritant**

Digitalis (foxglove): **poisonous**

Dracunculus (dragon arum):

poisonous; skin & eye irritant

dumb cane: See *Dieffenbachia*

Ecbium: **skin irritant**

Epipremnum (devil's ivy): **poisonous;**

skin & eye irritant

Euonymus (spindle tree): **poisonous**

Euphorbia (spurge): **poisonous; skin**

& eye irritant

NB: poinsettia, *E. pulcherrima*, is

not harmful

Ficus benjamina (weeping fig): **may**

cause skin allergy

Ficus carica (fig): **skin & eye irritant**

foxglove: See *Digitalis*

Fremontodendron: **skin & eye**

irritant

Gaultheria section *Pernettya*:

poisonous

giant hogweed: See *Heracleum*

Gloriosa superba (glory lily):

poisonous

glory lily: See *Gloriosa*

Hedera (ivy): **poisonous; skin**

irritant

Helleborus (Christmas rose, Lenten

rose): **poisonous; skin irritant**

henbane: See *Hyoscyamus*

Heracleum mantegazzianum (giant

hogweed): **severe skin irritant in**

bright sunlight

Hippeastrum (amaryllis): **poisonous**

Hyacinthoides (bluebell): **poisonous**

Hyacinthus (hyacinth): **skin irritant**

Hyoscyamus (henbane): **poisonous**



Foxglove (*Digitalis purpurea*)

Hypericum perforatum (perforate St John's wort): **poisonous**

Ipomoea (morning glory): **poisonous**

Iris: **poisonous; skin irritant**

ivy: See *Hedera*

Kalmia (calico bush): **poisonous**

+ ***Laburnocytisus 'Adamii'***:

poisonous

Laburnum: **poisonous**

Lantana: **poisonous; skin irritant**

larkspur: See *Delphinium*

laurel: See *Prunus laurocerasus*

Ligustrum (privet): **poisonous**

lily-of-the-valley: See *Convallaria majalis*

Lobelia (except bedding lobelia, *L. erinus*): **poisonous; skin & eye irritant**

Lupinus (lupin): **poisonous**

Lysichiton (skunk cabbage): **poisonous; skin & eye irritant**

Mirabilis (marvel of Peru, four o'clock plant): **poisonous; skin irritant**

monkshood: See *Aconitum*

Monstera deliciosa (Swiss cheese plant): **poisonous; skin & eye irritant**

morning glory: See *Ipomoea*

Narcissus (daffodil): **poisonous; skin irritant**

Nerium oleander (oleander): **poisonous**

Nicotiana (tobacco): **poisonous**

oleander: See *Nerium oleander*

Opuntia microdasys (bunny ears cactus): **skin irritant**

Ornithogalum (chinchinchee, star-of-Bethlehem): **poisonous; skin irritant**

Papaver somniferum (opium poppy): **poisonous**

Passiflora caerulea (hardy passion flower): **poisonous**

peace lily: See *Spathiphyllum*

Pernettya: see *Gaultheria*

Philodendron: **poisonous; skin & eye irritant**

Phytolacca (pokeweed): **poisonous; skin irritant**

poinsettia: See *Euphorbia*

pokeweed: See *Phytolacca*

Polygonatum (Solomon's seal): **poisonous**

Polyscias: **poisonous; skin irritant**

Primula obconica (German primula): **skin irritant**

privet: See *Ligustrum*

Prunus laurocerasus (cherry laurel, laurel): **poisonous**

Prunus lusitanica (Portugal laurel): **seed kernels are poisonous**

Rhamnus (including *Frangula*) (alder buckthorn, buckthorn): **poisonous; skin irritant**

Rhus verniciflua*, *R. radicans*, *R. succedanea*, *R. diversiloba*, *R. rydbergii*, *R. striata*, *R. toxicarium*, *R. vernix (Japanese lacquer tree, poison ivy, sumach):

poisonous; severe skin irritant

Ricinus communis (castor oil plant): **poisonous**

Robinia pseudoacacia (locust tree): **poisonous**

Ruta (rue): **severe skin irritant in bright sunlight**

St John's wort: See *Hypericum*

Sambucus (except *S. nigra*) (elder): **poisonous**

Schefflera (umbrella tree): **skin irritant**

Scilla: **poisonous**

snowberry: See *Symphoricarpos*

Solanum (most species): **poisonous**

Solomon's seal: See *Polygonatum*

Spanish broom: See *Spartium*

Spartium junceum (Spanish broom): **poisonous**

Spathiphyllum (peace lily): **poisonous; skin & eye irritant**

spindle tree: See *Euonymus*

spurge: See *Euphorbia*

sumach: See *Rhus*

Swiss cheese plant: See *Monstera*

Symphoricarpos (snowberry): **poisonous**

Symphytum (comfrey, Russian comfrey): **poisonous**

Syngonium (arrowhead vine, goosefoot vine): **poisonous; skin & eye irritant**

Taxus (yew): **poisonous**

thornapple: See *Datura*

Tulipa (tulip): **skin irritant**

Veratrum (false hellebore): **poisonous**

Vitex (chaste tree): **skin irritant**

Wisteria: **poisonous**

yesterday, today and tomorrow: See *Brunfelsia*

yew: See *Taxus*

Zantedeschia (calla lily): **poisonous; skin & eye irritant**

All of these plants are safe to grow provided they are treated with respect. Remember they are ornamental plants not food plants.

A summary of RHS policy

1 The Royal Horticultural Society has an established policy of providing general advice to enquirers on the subject of potentially harmful plants through its Botany Department at Wisley, and this will be maintained.

2 The Society's botanists and horticulturists are alert to public concern and developments relating to potentially harmful plants. The RHS is prominently represented on national forums which consider the matter, such as the Medical Toxicology Unit/RBG Kew/RHS Wisley Group.

3 RHSE Plant Centres follow the HTA Code of Practice on the labelling of potentially harmful plants.

4 The RHS Gardens adopt a positive, educational attitude to the subject in thoughtful labelling of plants. Because only very few plants are dangerous it is seen as important to keep the subject in perspective. The majority of plants are grown to be seen and not handled.

5 Emphasis is laid upon clear guidance in 'herb' gardens which include much-handled medicinal herbs and allied plants, some of which are dangerous if misused.

6 RHS Gardens restrict public access to the potentially most harmful plants by care in choice and planting position.

7 The RHS Gardens' list of surplus seed, and packets of surplus seed available to Members include guidance on potentially harmful plants.

8 An RHS leaflet is available to visitors and other enquirers on the subject of potentially harmful plants, offering general and specific advice.

In Summary

Most of the plants grown in gardens do not present any hazard to humans or animals, and incidents of serious plant poisoning in the United Kingdom are rare. Nevertheless it is a responsibility of gardeners to see that no avoidable risks are presented, and knowledge of potentially harmful plants should be gained. It is an equal responsibility of garden users to be alert for their own safety and especially that of children and animals. Look out for safety information on labels when purchasing plants. Learn what to do in the unlikely event of poisoning through eating plants.

May 2001

Source: The Science Departments, The Royal Horticultural Society's Garden, Wisley, Woking, Surrey GU23 6QB

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