Not to be sniffed at

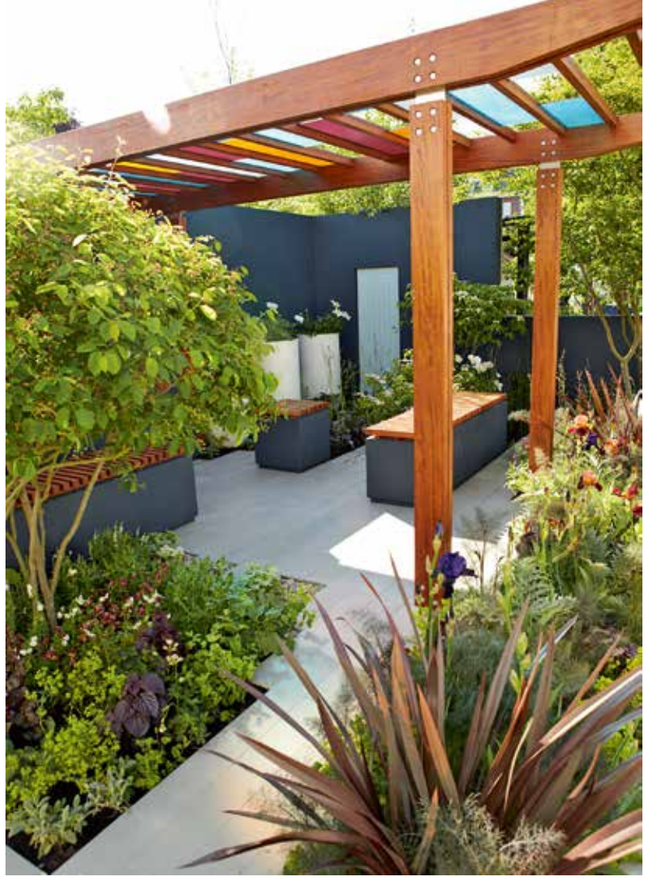
In both public landscaping and private gardens, sensible plant choice and thoughtful positioning can help relieve allergy symptoms »

Author: Sally Nex, freelance garden writer and *The Garden* columnist

PHOTOGRAPH: GAP / TIM GAINEY

What is hay fever?

According to Allergy UK, one in four people have hay fever (an allergy to pollen) which means the proteins in pollen cause the immune system to overreact and produce a substance called histamine. This chemical causes the nose, eyes, throat and sinuses to become swollen, irritated and inflamed, leading to symptoms such as sneezing, running nose and itchy red eyes.



Designer Olivia Kirk selected low-allergen plants in 'The University of Worcester Garden' (above) at RHS Chelsea Flower Show 2010, demonstrating the wide diversity of planting that can be used.

Anyone who has endured a sneezing or coughing attack while visiting the RHS Chelsea Flower Show will be painfully aware that plants can trigger allergic reactions. Chelsea's majestic London plane trees (*Platanus* x *hispanica)* often shed copious pollen and other material from flowers, old fruit and leaves in spring – which has unfortunate effects on some of the show visitors.

Hay fever, or seasonal rhinitis, affects about one in four people in the UK. About 5.4 million have asthma, often exacerbated by pollen from certain, frequently wind-pollinated, plants such as grasses. In gardens, sufferers can unwittingly make symptoms worse by growing plants that trigger allergic reactions. 'It may be that a specific tree in your garden is covering you with clouds of pollen as soon as you walk outside your back door,' says Shenagh Hume, horticultural advisor to Allergy UK. However, it is possible to make your garden a more comfortable place to be.

Eliminating plants that produce pollen altogether may be undesirable. Native trees, including hazel, alder, oak and birch are high in allergens yet are highly beneficial to wildlife. And growing pollen-rich flowers helps reverse declines in populations of pollinating insects such as bees and butterflies. RHS Senior Horticultural Advisor Helen Bostock, who runs the Plants for Bugs project, says some compromise may be required. 'It's all about getting a balance. Double or pollen-free flowers may not be the best for pollinating insects but they are likely to provide valuable habitat and vegetation for other invertebrates.'

Measuring allergenicity

American horticulturist Tom Ogren began to research low-allergen plants in the 1980s in order to find a way to relieve his wife's asthma symptoms. Finding that information was scarce, he began detailed experiments, eventually devising the first formal test for a plant's ability to cause allergic reactions. His Ogren Plant Allergy Scale (OPALS) rates plants from 1 (least likely to provoke reactions) to 10 (extremely likely).

The scheme is widely accepted in the USA, but in the British Isles it is only Queux Plant Centre on Guernsey, Channel Islands, that currently indicates OPALS ratings on plant labels. Owner Nigel Clarke says he cannot understand why it is not common practice. 'More than 20 percent of the population has allergies, and I know of no other industry which would alienate 20 percent of its customers,' he says. Nigel worked with Birmingham City Council to create a Gold medal-winning low-allergen display (pictured p82) at RHS Chelsea Flower Show last year, in which all plants were marked with OPALS ratings. This was the fourth Chelsea exhibit to feature low-allergen planting since 1993. However, despite increased awareness that plants can trigger allergies, plant retailers say customers are not asking for information.

Right plant, right place

Although often associated with the countryside, hay fever is worse in urban environments, where pollen becomes more allergenic when combined with pollutants and is kept in the air by hard surfaces. Despite this, garden designer Olivia Kirk, who has created low-allergen designs for hospices, says »

Choosing and placing plants with allergies in mind

Plants to place away from the home

These plants may be enjoyed by allergy sufferers but are best kept far from the house.

1 Holly
Ilex aquifolium 'Silver Queen' (male holly)
OPALS allergy rating: 9

2 Hedge
Ligustrum ovalifolium (privet)
OPALS allergy rating: 9

3 Tree
Betula pendula (silver birch)
OPALS allergy rating: 9

4 Climber
Wisteria floribunda (reactions caused by scent)
OPALS allergy rating: 7

5 Evergreen shrub
Juniperus (juniper)
OPALS allergy rating: 10

6 Perennial
Leucanthemum vulgare (ox-eye daisy) OPALS allergy rating: 7


1

GAP / DAVE BEVAN


2

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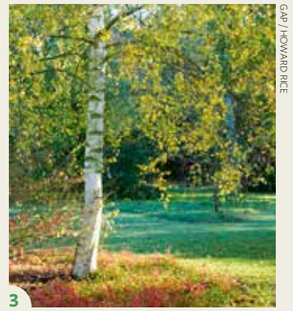
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GAP / HOWARD RICE


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GAP / JO WHITWORTH


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Alternative plants to use freely

These plants are less likely to trouble allergy sufferers, so can be planted nearer the home.

1 Holly
Ilex aquifolium 'Argentea Marginata' (female)
OPALS allergy rating: 1

2 Hedge
Escallonia 'Iveyi'
OPALS allergy rating: 3

3 Tree
Sorbus aria 'Lutescens' (whitebeam)
OPALS allergy rating: 3

4 Climber
Clematis armandii
OPALS allergy rating: 3

5 Evergreen shrub
Rosmarinus officinalis (rosemary)
OPALS allergy rating: 3

6 Perennial
Dianthus (garden pinks)
OPALS allergy rating: 3

With advice from Queux Plant Centre, Guernsey, the Birmingham City Council display at RHS Chelsea Flower Show 2017 (above) demonstrated the value of gardening with pollinating insects in mind, but also included OPALS ratings on plant labels.

An OPALS label (below) gives plant ratings from the least (1) to the most likely (10) to cause allergic reactions.

designers and contractors tend to use limited palettes of reliable plants for public landscaping, often without considering their effect on hay fever and asthma sufferers. 'Designers look at the plants they are going to use in a place rather than the people who might live and work there,' she says. Silver birches (*Betula pendula*), for example, are popular choices near schools as they readily absorb particulate pollution. Yet they have an OPALS rating of 9, making them highly likely to trigger allergies, especially in children.

Tom Ogren believes breeders of dioecious amenity plants (those with separate male and female plants) also increasingly favour male-only cultivars. These do not produce flowers, fruit, seeds or seed pods that create mess in public areas and so are lower maintenance – however, instead they emit clouds of allergenic pollen. 'When I came to the UK 20 years ago there were still female trees in towns and cities,' he says, 'now they're mostly males.'

Finding solutions at home

It is still possible to enjoy growing allergenic plants without unpleasant side effects by positioning them within sight but away from back doors, pathways and patios. Pollen levels are highest near the plant: one study of Scots pine (*Pinus sylvestris*) found half the pollen produced fell within 11m (36ft), and only seven percent made it further than 200m (656ft).

Choosing plants with an OPALS rating of five or less dramatically lowers pollen levels. A hedge on the windward side of a garden also helps filter pollen from outside, as long as the hedging plants chosen are low allergen. In urban areas, where hard surfaces keep pollen airborne, soft landscaping 'pollen sinks' – such as tightly clipped lawns, rain gardens and swales – trap and absorb pollen grains from the air.

Helen Bostock recommends tubular or bell-shaped flowers such as foxgloves (*Digitalis*) and snapdragons (*Antirrhinum*) which hold pollen within the flower so have low OPALS ratings, yet are beneficial to insects. Some plants also have high levels of nectar yet produce little pollen: catmint (*Nepeta*) scores just 2 OPALS, yet is one of the best plants for pollinators. 'The big picture is that we have a lot of choice in plants, especially in the UK,' says Helen. 'It's about being sensitive to what's appropriate in a given situation.' ○

Case study: Battle of the birches

The children of Hamish Riach, CEO of a New Zealand rugby team, began suffering severe allergic reactions, and he did not know the cause. They included allergies to fresh fruit, a phenomenon known as oral allergy syndrome, in which a reaction to birch pollen can trigger food allergies, too. Hamish suspected the two 12m (39ft) tall *Betula pendula* (silver birch) in the street outside his house (below), and when the local council refused to fell the trees, Hamish took it to court.

During the case many people living near large silver birches in Christchurch came forward, complaining of asthma, itchy eyes, coughing and breathing problems. After a four-year battle the council replaced the trees with maples.

The case sparked a rash of similar requests in the city. In one, a man whose 9-year-old daughter suffered pollen allergies and asthma forced her primary school to replace birch trees in the playground with low-allergen *Acer palmatum* 'Autumn Glory'. The city council now removes publicly owned birch trees where residents can prove they are causing allergies.

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Resources

Allergy UK: 01322 619898 **allergyuk.org**

Asthma UK: 0300 222 5800 **asthma.org.uk**

Queux Nursery, Guernsey: **allergyfriendlyplants.co.uk**

The Allergy-Fighting Garden by Thomas Leo Ogren, Ten Speed Press, 2015, ISBN 9781607744917 **allergyfree-gardening.com**

University of Exeter medical study: Asthma attacks reduced in tree-lined urban neighbourhoods (published Dec 2017) **https://tinyurl.com/y9xfugzv**