Allergic diseases

Minor irritation or major aggravation?

Foreword

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It is estimated that more than 80 million people in Europe have an allergic disease, with prevalence over the last 20-30 years increasing dramatically. Allergy problems are now not restricted to seasons and regions, with people often allergic to numerous environmental allergens and experiencing multiple symptoms associated with a range of conditions including allergic asthma, allergic rhinitis, food allergies, and dermatological problems such as allergic eczema and urticaria.

The recent escalation of allergic diseases may be attributable in part to environmental factors: people are now exposed to a multitude of substances, both natural and man-made, that would have been alien just a few decades ago. In westernised societies we are spending more time indoors - at home, school, in offices and within enclosed transportation systems - where allergens that are difficult to avoid are increasingly prevalent. Urban dwellers are now more likely to be affected by certain allergies than people living in rural areas. Psychological stress is also thought to be linked to allergic disorders as modern living and hectic lifestyles have an increasingly negative impact.

The effect on the individual suffering from an allergic disease can be substantial, with common symptoms including difficulty breathing, coughing, repeated sneezing, itchy, swollen and sore nose and eyes, and eczema and dermatitis. In very serious cases, an anaphylactic reaction can be fatal.

Fortunately not all symptoms of allergic diseases are so serious to require emergency care. However, repeated studies have shown that they have a significant impact on the lives of patients and their families. For example, nearly two thirds of people with allergic rhinitis report that symptoms disturb them enough to interfere with sleep and daytime activities. Leisure and time with family can be seriously affected as can education and professional careers.

Learning what to do in order to control an allergy when symptoms strike can be an important part of people's lives. However, many people with allergies do not know how to get help. A recent report by the European Federation of Allergy and Airway Diseases Patients' Association (EFA) found that even patient group members are resigned to coping with their symptoms and are left feeling that there is nothing that can be done for them.

Despite the very real and obvious impact that allergic diseases can have on a patient's life, the condition is frequently under-diagnosed, mismanaged and under-treated. In the past, patients have been reluctant to visit their doctor or comply with their treatment regime, preferring strategies of avoidance and self medication. Some healthcare professionals and systems have also inadvertently undermined the condition by not having the latest medical knowledge or tools. Consequently, many people with allergies are simply unaware of effective treatments and correct avoidance strategies that are available to them.

The impact of the escalation of allergic diseases on European healthcare systems is substantial; the European Academy of Allergology and Clinical Immunology (EAACI) estimate a financial cost in Europe of around €100 billion per annum.

This report brings together all recent evidence on allergic diseases in Europe for policy makers: demonstrating that allergic diseases are an increasingly important problem for the people of Europe. The European Parliament and Council recently adopted the 7th Research Framework Programme for 2007 to 2013, in which respiratory and allergic diseases are highlighted for priority research. We now need to translate this commitment into action with results. In addition to research efforts, we have a responsibility at an EU level to promote good public health, to share best practice between Member States and to control and reduce some of the environmental contributors to allergies (such as air quality targets in the Clean Air For Europe Directive). This report sets the challenge to develop a European Charter for Action on Allergy; it is incumbent upon us all to make it a reality.

John Bowis MEP

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Scale of the problem

Allergic diseases in Europe are on the rise, and are no longer confined to specific seasons or locations. Nor are they confined to people living in rural areas. Today you are just as likely to suffer from an allergy if you live in an urban area and spend the majority of time indoors.
In the last 20-30 years the prevalence of allergic diseases has escalated significantly, a trend that shows no signs of abating. It is estimated that more than 80 million people in Europe suffer from some kind of allergic disease,[1] and that by 2015 half of all Europeans will be suffering from an allergy.[2]

Of the 80 million people in Europe that are estimated to suffer from some kind of allergic disease, the number suffering from allergic rhinitis is greater than 61 million.[3] Allergic rhinitis can progress to, or can be associated with asthma, a potentially deadly condition which often requires costly interventions throughout life.
In the Western world nearly one in three children is allergic, of which approximately 30-50% will develop asthma.[2] The European Academy of Allergology and Clinical Immunology (EAACI) estimates that around 7% of Europeans have asthma but that prevalence is expected to nearly double to 12% within the next 10 years.[2] While not all cases of asthma are related to allergic reactions, the World Health Organization reports that asthma kills one European every hour.[2]

However, although healthcare practitioners are concerned over the rising prevalence of allergic diseases in Europe, there is very limited comparable data on the extent of the problem and consequently health authorities at Member State level have not always been compelled to make judgments regarding service provision.

Country & incidence

France Nearly 17.5 million people reportedly suffer from allergic rhinitis with prevalence of nasal allergies in the 20-44 age group in urban areas estimated at 31%.[3]

Germany A total of 14.8 million people have reported some form of allergic rhinitis, with one study estimating the average percentage of allergic rhinitis sufferers to be 18% of the population. A study in mid-1990s Hamburg (Western Germany) reported that 24% of people suffered from some form of allergic rhinitis, while in the city of Erfurt (Eastern Germany) the figure was 15.8%.[3]

Italy Almost nine million people reported having allergic rhinitis. The average prevalence of nasal allergies among the 20-44 age group was 18%, with an estimated total prevalence of allergic rhinitis of 16%.[3]

United Kingdom The UK Department of Health reports that allergies in the UK have tripled in the past 20 years affecting 30% of the population (around 18 million people), and 40% of children, with severity and complexity rising.[4,5]

The UK already has one of the highest rates of increase in allergies worldwide, with around a third of the total population expected to develop an allergy at some point during their lives.[6] In 2004, almost 15 million cases of allergic rhinitis were reported.[3]

Spain Compared to other European countries, Spain has a relatively low reported prevalence of allergic rhinitis. A total of 5.6 million people reported symptoms, approximately 14% of the Spanish population aged 20-44 years.[3]

It should be noted that for most European member states, no data exists on allergic disease prevalence.

Are we allergic to modern life?

Little is known as to why there has been such a steep escalation in allergic diseases over the past few decades. It may be because allergens have become more aggressive as the environments we live in have changed. People are now also exposed to a multitude of substances, both natural and synthetic, which were not in our environment 20 years ago.[7]

Allergens and triggers: what causes allergies?

An allergen is the name given to a substance which can cause an allergic reaction. An aggressive allergen is defined as one that is more likely to cause symptoms than others because the body reacts in a more intense way. Not all allergens directly cause a reaction but the reaction can be triggered when the allergen interacts with other causal factors such as stress or air pollution.[8]

There are thousands of allergens, ranging from pollen to shellfish. Most allergens contain proteins, which are to blame for allergic reactions, but there are some, such as penicillin and other medicines, which simply combine with proteins when they enter the body.

Common allergens can be found all around us and can be ingested through the nose, the eyes, the stomach and lungs, touch the skin or enter directly into the body through an insect sting or bite.[9] In a survey[10] conducted by the European Federation of Allergy and Airway Diseases Patients' Association (EFA), patients named multiple allergens and triggers including:

Allergens	Triggers
House dust mites	Tobacco smoke
Domestic and wild animals/insect venom	Traffic pollution
Mould	Air pollution
Perfume	Indoor/outdoor temperature
Feathers	Humidity
Foods	Stress
Cleaning products	

In westernised societies we are spending much more time indoors where we are exposed to allergens associated with pets, insects, house dust mites, foodstuffs and mould. Foods imported into Europe, such as nuts or kiwi fruit, can also trigger allergic reactions.[11]

Indoor and outdoor airborne pollutants are major factors in the allergy epidemic, with a defined link between the increase in air pollution and the prevalence of allergic diseases.[12] Air pollution does not only irritate the airways, it has also been shown to make allergens like pollen more aggressive.[12] The increasing incidence in allergic asthma in children may coincide with modifications to the home, school or day-care centre environment. Changes to bedding and air conditioning units, or increased concentration of humidity and mould, can result in changes to indoor air quality and subsequent exposure to allergy triggers.[13]

A plethora of new indoor and outdoor pollutants may also play a role in the duration of allergies, with today's allergy patients suffering for longer. Nearly six out of ten allergic rhinitis sufferers in Europe were found to have experienced symptoms for more than 11 years; a quarter of those surveyed said they had suffered all their lives.[10]

City vs country: does where we live make a difference?

Living in urban environments, amid heavy pollution and numerous outdoor and indoor allergens, is contributing to a rise in the prevalence and severity of allergy symptoms. Contemporary allergy sufferers do not necessarily live in the country, but in cities and towns; working in offices, shops, factories or attending school.

There is a marked rise in allergic rhinitis and asthma in urban areas, especially inner cities. Poor air quality from pollution, indoor allergen exposure and high stress lifestyles have all been linked to the risk of developing allergic rhinitis, asthma, or both.[12] Use of modern fuels may contribute to the increase in allergic disorders, as may higher volumes of traffic in urban areas.[14]

Ironically, those of us living in urban conurbations tend to be more affected by hayfever, asthma, and allergic sensitization than our rural counterparts.[13]

In studies, asthmatic children from urban areas had more positive responses in skin prick tests (SPTs) to dust mites, mould, cats and cypress trees than their rural counterparts. The urban children demonstrated more allergic responses to both indoor and outdoor allergens.[13]

Are today's allergies more complex?

Today's allergy patients may suffer from more than one allergy. Allergic rhinitis is often accompanied by other conditions, such as asthma, eczema, urticaria and food allergies.

As asthma and allergic rhinitis are both inflammatory conditions, they share many common triggers.[3,15] Some 60-80% of asthmatics also have allergic rhinitis.[15] More than three out of ten allergic rhinitis patients also suffer from allergic asthma and eczema, while two out of ten have urticaria.[10]

A survey of people with allergic conditions conducted by EFA found that four out of ten allergic rhinitis patients experience one or two severe symptoms; and a further three in ten have three or more severe symptoms.[10]

Allergic rhinitis patients are not only sensitive to pollen, with 77% of such conditions caused by flowers or plants, but they may be sensitized to many other substances or allergens (polysensitized). Nearly four out of ten are affected by up to five substances.[10]

Allergic rhinitis is now not restricted to only spring and summer, commonly referred to as hayfever with seasonal experience, but may also last over autumn and winter.[3] In the EU, nearly half of allergic rhinitis patients reported symptoms for more than two seasons, with 15% experiencing symptoms all year round.[10]

The patient experience

The physical and psychological impact of living with an allergy

The psychological and physical impact of living with an allergic disease can be enormous, severely impeding quality of life. While some allergy symptoms may be mild, others are severe and extremely debilitating. Today's allergy symptoms are not only triggered by more things, but individuals with allergies also tend to be polysymptomatic, meaning patients are likely to have more than one form of allergy.[10]

Condition & symptoms
Allergic Rhinitis Repeated sneezing, blocked, runny or itchy nose; distorted sense of smell and taste; and difficulty breathing.
Allergic Rhinoconjunctivitis The nasal symptoms of allergic rhinitis accompanied by watering and itchy, or sore and swollen eyes.
Allergic Asthma Difficulty breathing, shortness of breath, coughing and tightness in the chest.
Eczema/Dermatitis Severe itching, excessive dryness and scaling of the skin.
Urticaria/Hives Intensely itchy wheals (hives) on the skin, which can result from either an allergic reaction, and/or exposure to sunlight, heat, cold, pressure, chemicals or exercise (physical urticaria). For some patients, especially those who have chronic urticaria (lasting more than six weeks), no specific cause can be identified.
Anaphylaxis Swelling of mouth, tongue, lips, skin and eyelids progressing to vomiting, wheezing, breathing difficulties, cardiovascular collapse and death.
Food allergy Symptoms vary according to severity of reaction but may include a combination of the above.

For some people with allergies, avoidance strategies can be successfully employed to limit the impact. However, due to the increasingly diverse range of allergens found in the home and workplace, it can be difficult for people with allergies to avoid exposure completely. Polysensitized people can experience the the symptoms all year round, being unable to seek any respite indoors, as this is principally where they are exposed to allergens such as house dust mites, nor outdoors, where pollen and environmental pollution may also trigger reactions.

While fortunately not all the symptoms of allergic diseases are serious, the day-to-day life of people with allergies can be severely impaired as the constant nature of allergic reactions to modern life takes its toll. Over a third of patients feel that their symptoms make them tired and irritable all the time[10] due to disturbed sleep patterns resulting in lethargy, indecision and significant impairment in learning and cognition.[16] Lack of sleep can also make adults miserable and less efficient, and children withdrawn, anxious and depressed.[16]

Patients may be locked in a vicious circle of stress, which is both a result of, and a stimulus for their condition.[17] Acute stress has been shown to accelerate disease onset, but recent surveys show that the diseases themselves can be considered stressful life events. Even relatively mild allergic rhinitis can be disabling to children, affecting academic achievement and having an adverse effect on career opportunities.[2]

For patients with allergic asthma, the physical and psychological impact of the symptoms can be extremely severe, reducing the physical capabilities of education, work and play. Similarly, food allergies can affect whole families on special occasions and holidays, and the obvious physical symptoms of severe dermatitis can have a very negative effect on self image.[2]

The patient experience

Living with allergic diseases – the Hayward family

Rita Hayward copes well with her large family, despite all but one of her children suffering from allergies. The coping strategies she employs for the management of so many conditions may be effective, but have had a tremendously stressful impact on her daily life.

Seven year-old Chloe Hayward suffers from asthma, eczema, and allergic rhinitis. Chloe has to have her medications accessible at all times in case she has an attack, and has had to learn to be especially vigilant about her own condition. Asthma can be triggered by a variety of events and circumstances; anything that irritates the airways can bring on symptoms. A very important aspect of controlling symptoms is avoiding the triggers, but in everyday life this can be extremely difficult. Chloe's allergic rhinitis means she has to cope with a runny, stuffy and itchy nose, sneezing, and irritated ears and throat. With allergic rhinitis triggers becoming ever more diverse and aggressive, Chloe and Rita have to monitor the environment constantly, recognising and acknowledging anything that provokes an attack of allergic rhinitis, or asthma. A large burden for a little girl, and a big worry for Rita.

As with many people who have asthma and allergic rhinitis, Chloe also has eczema, and needs to take special baths and moisturize frequently. Bath and bed times are not easy for Rita, who has to ensure that Chloe's skin is correctly saturated to prevent it from becoming inflamed and painful. But Chloe's routine is far from the whole story for the Hayward family. Five year-old Kyle has far more problems, as he suffers from asthma, allergic rhinitis and a variety of food allergies. He too suffers from eczema, to the extent that Rita and her husband have had to put a strict daily management plan into practice. As a baby, Kyle had to be moisturized all over at least eight times a day, and although this has now dropped to three or four times a day, the time it takes to apply the ointments can be significant. Kyle can suffer from distressing flare ups on his body and specifically on his face. When this happens those areas need extra care and attention. For all these conditions Kyle must keep his medication close at all times.

Life is stressful for the Hayward family, as well as for little Kyle, who was diagnosed with allergies to peanuts, tree nuts, milk, egg, shellfish, sesame seeds, peas, lentils, chickpeas and butter beans as a very small child. A series of invasive tests, including skin prick, blood and food challenge tests, diagnosed these allergies. Kyle's allergies impact on every single aspect of the Hayward's lives, and despite becoming a near expert on allergy management, Rita still finds coping with her children's conditions very stressful and draining. The time it takes to prepare treatments, as well as pick up prescriptions, liaise with healthcare workers and inform her children, all take up valuable time. Flare-ups and incidents are also traumatic for Rita, as well as her children, and mean that she can never really relax and be at ease whilst her children are living with allergies.

The eldest Hayward child, sixteen year-old Ines, appears to be allergy free. But the family are not ruling out the possibility that Ines could yet develop a condition, as they are all atopic and certainly don't take anything for granted.

Economic and social impact

The cost to European healthcare systems of treating allergic diseases is substantial and increasing with the corresponding rise in prevalence. It is estimated that asthma alone costs Europe €27 billion per year, with expenditure expected to grow to €50 billion within a decade.[2] The combined cost of allergic diseases to European health systems can only be estimated, as information on the costs relating to various allergic diseases has not been collated. However, the full financial impact is estimated to be around €100 billion a year.[2]

It is only recently that efforts to understand the socio-economic burden of allergy have been made. As patients are restricted in their social and physical activity, so their productivity and professional life will be affected. Children with allergic symptoms may have difficulty with learning, and adults may under-perform professionally.[18] When symptoms are severe and effective treatment is not available to patients, working days may be compromised and even lost. Recent surveys have shown that allergy has a massive effect on a patient's professional and social life, with almost 70% of patients stating that their condition limits their way of life.[10]

In a recent survey[19] France came top as the nation most likely to visit their GP with allergic symptoms, at 54% of respondents, followed by Spain at 52%, Germany at 44%, the UK at 39% and Italy at just 29%. Almost one in five allergy patients across Europe did nothing for their condition.[19] Public awareness campaigns to encourage allergy patients to access the correct treatment are predicted to drastically reduce the number of hospitalizations, and absenteeism from work and school, resulting in a significant reduction in allergy costs overall, although initial healthcare costs may rise.[18]

The socio-economic costs of allergic diseases are very different from those of other diseases, such as cancer and cardiovascular conditions, which are generally considered to represent the largest public health cost. Allergic diseases do not tend to kill, with the exception of asthma and anaphylaxis, nor do they require expensive short-term treatments. The real public health cost is the drain on resources over a prolonged period, as the lives of sufferers may be impaired for several decades.[20] To fully evaluate the socio-economic costs of allergic diseases, it is important to consider the direct costs of hospitalization, physician consultations, and treatments, but also the indirect costs of days lost in work and education, modifying environments and care provision.

Direct costs

Hospital care

- Inpatient care (hospitalization)
- Emergency services
- Outpatient services

Physician services (consultations)

Laboratory diagnostic services

Medications

Indirect costs

Academic/professional days lost

Caregiver costs

Allergen avoidance measures and environmental adaptation costs (housing, clothes, detergents etc.)

Treatment for allergy

While the impact of an allergic disease on the life of a patient can be immense, fortunately most allergic diseases can be successfully treated and their symptoms drastically reduced. However, learning what to do when an allergy strikes can be difficult as the source or trigger is not always obvious. While most Europeans benefit from having excellent relationships with healthcare practitioners, studies show that allergic diseases are often incorrectly or under-diagnosed, and under-treated.[1]

Allergen avoidance

For many patients the first line of defence is prevention. In principle this form of approach is obvious and successful, but in practice it can be very difficult. Changes to the home environment, such as effective pollen screens and special mattress encases, or avoidance of particular foods can and do play an important role for patients.

However, the very nature of modern existence means that we are continually exposed to multiple allergens in the home, school and workplace. Successful allergen avoidance is often dependent upon a high degree of knowledge and empowerment of the allergic individual, and often relies on the co-operation of third parties such as families, employers and teachers. Therefore, for many, especially for those with a high degree of polysensitization, allergen avoidance is neither feasible nor possible.

Interventions for the treatment of allergic diseases

When the burden of the symptoms of an allergic disease first start to take hold, over the counter (OTC) medicines from local pharmacists are often used. While self medication and the associated guidance can have significant benefits for some, for many highly polysensitized patients and those with severe symptoms, it is simply not enough.

For patients with persistent and severe symptoms, consultation with a physician and prescribed medicine provides the best way of combating an allergic disease. Significant advances in the treatment of allergy over the last few decades mean that even the most persistent and burdensome of allergies can now be effectively controlled. The most common forms of treatment are listed here:

Treatment classification & notes
Oral antihistamines The gold standard treatment for allergic diseases (excluding asthma) across Europe. Effective and widely available, recent development from the European pharmaceutical industry has led to new types of antihistamines with very few side effects. Prescribed for approximately 30% of all allergic disorders in Europe.
B2-agonists Effective in preventing exercise-induced asthma and wheezing. However, some physicians are concerned that long-term use may mask underlying inflammation.
Topical and oral corticosteroids Inhaled corticosteroids are widely available in Europe and used primarily for the long-term treatment of patients with intermediate and severe asthma. Nasal topical corticosteroids can also be used for allergic rhinitis and creams for atopic dermatitis.
Anticholinergic drugs Used for the treatment of nocturnal asthma and where the side effects of B2-agonists are not acceptable.
Immunotherapy Prevents allergic reaction by exposing patients to the allergens responsible for the allergic symptoms thereby reducing sensitivity. Treatment is usually by injection over a three year period and can be effective although it is not recommended for highly polysensitized patients and those with severe asthma. Sublingual immunotherapy treatments are also becoming available.
Adrenaline (epinephrine) A natural antidote to the chemicals released during a severe allergic reaction triggered by a drug, food or insect allergy. Requires rapid injection to be effective.
Others Xanthines, sodium cromoglycate and sodium nedocromil indicated for the treatment of asthma. Anti-IgE is also indicated for severe allergic asthma.

European healthcare management:

A crisis in allergy?

The increasing prevalence of allergic diseases over past decades is well established and accepted by most European governments and health authorities, including the World Health Organization.[21] However, surveys have found that patients of today's allergies are not treated properly, with conditions often incorrectly or under-diagnosed and subsequently under-treated.[2] In the case of allergic rhinitis, data show that most people go undiagnosed and do not receive the treatment they require because they choose to buy medicines over the counter from local pharmacists and do not go to see their doctor.[3]

National Health Authorities

The evidence from patients across Europe is indisputable, and stakeholders agree that access to diagnosis, treatment, education, information and continued care should be a priority for all Member State health authorities. However, the absence of large-scale epidemiological studies on prevalence has thus far prevented most authorities from understanding the extent of the issue and taking the steps necessary to commission the requisite services. Lack of medical education focused on allergic diseases and their seemingly benign nature has also contributed to inadequate services for patients. Therefore, without large scale epidemiological knowledge, European Member State healthcare systems are likely to continue to deny the appropriate care to patients that they so desperately need.

All European Member State healthcare authorities must answer the following questions before decisions are made on how to effectively reform services:

- What is the current and future epidemiology of allergic diseases?
- What is the current provision of care and treatment for allergic diseases by both the national healthcare systems and independent providers?
- What central targets and governance systems are required to ensure allergic disease services are benchmarked for efficacy over the long-term?

European Community

European Union institutions have taken great strides in recent years to encourage research and best practice in the treatment of allergic diseases by all Member States. However, more needs to be done under the public health and environment remit of the European Union to encourage all Member States to implement the strategies necessary to tackle the problem of today's allergies on a pan-European basis. Specifically, consideration should be given to:

- Allocating additional funding to research the link between causal environmental factors and prevalence of allergic diseases.
- Implementing public health education and awareness programmes to empower patients with the knowledge they need to access correct treatments and foster a culture of tolerance and understanding.
- Commission large-scale epidemiological studies on allergic disease prevention, prevalence, impact and future trends.

Case Study – United Kingdom

In the UK it is estimated that around 30% of the adult population and 40% of children suffer from an allergic disease – one of the highest rates in Europe.[4] The independent Health Select Committee of the United Kingdom Parliament recently conducted an inquiry into the provision of allergy services taking evidence from patients and representative groups, physicians, health authorities and government ministers. The report of the inquiry found current provision "manifestly inequitable" and made numerous recommendations to improve services for allergy sufferers, including an infrastructure of specialist allergy services.[4]

In response to the inquiry, the Department of Health undertook a review of allergy services.[22] It found that there are significant gaps in the knowledge of clinicians in both primary and secondary care, the commissioning of services for allergy, service requirements (including costs and workforce) and epidemiology of the problem. Department of Health Ministers have now pledged to identify what local allergy service needs are, establish more training programmes for allergologists and develop guidelines on treatment best practice.

However, the Department of Health also acknowledged that whilst evidence from patients is compelling, the epidemiology of allergic diseases will remain unknown for the foreseeable future.

A European Charter for Action on Allergy

Today's allergic diseases transcend season, region and demographics affecting millions of Europeans. While many have access to high quality healthcare, and allergic diseases are recognised by health authorities as a growing problem, research shows that large numbers of people are continuing to suffer in silence without the care they so badly need to live a normal life.

Unfortunately, this situation is expected to get progressively worse as modern lifestyles expose us to evermore aggressive allergens, with some countries now predicting that a third of the population will develop an allergy at some point during their lives.[6]

Many allergic diseases can be successfully treated with the right intervention and avoidance strategies. However, more can be done and more must be done to ensure European Member State governments tackle the problem of allergic diseases.

We call on all European Member States governments to implement the European Charter for Action on Allergy:

1. **Recognize allergic diseases as a public health priority.**
2. **Conduct epidemiological research on allergic disease prevalence and trends.**
3. **Ensure healthcare systems are fully equipped and resourced to provide professional healthcare education, access to reimbursed medication and patient disease information.**
4. **Establish guidelines for the cost-effective management of and therapy for allergy patients.**
5. **Establish programmes to train, educate, empower and rehabilitate allergy patients.**
6. **Work with the European Community to establish an allergy-friendly environment for all.**

Supporting organizations

European Federation of Allergy and Airways Diseases Patients' Associations (EFA)

Founded in 1991, the EFA is a non-profit network of allergy, asthma and chronic obstructive pulmonary disease (COPD) patient organizations. Based in Brussels the EFA represents 31 members from 18 countries across Europe who together have over half-a-million patient and carer members.

The EFA is the foremost voice for allergic and respiratory diseases within the development of European public policy and delivery of patient-centered health services, products, treatments, environment and research in partnership with other like-minded organizations. EFA is also the platform for members to exchange experiences and best practice.

Our core mission is to reduce the frequency and severity of allergies, asthma and COPD, minimize their societal implications, improve health-related quality-of-life and ensure full citizenship of people with these conditions, pursuing equal health opportunities in the field of allergy and airways diseases in Europe.

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UCB Institute of Allergy

Division of UCB Pharma S.A., The UCB Institute of Allergy (IOA) is an independent and not-for-profit organization, created in 1987 to combat allergy.

Under the supervision of a Scientific Advisory Board made up of eminent European specialists in the field of allergy, IOA has initiated many actions. These aim to inform and educate about allergy, to improve prevention, to promote research, to analyze the current situation and to define key actions to be taken over the coming years. Moreover IOA favors cooperation between various allergy related organizations. The Institute is present all around Europe with more than 20 national sections and in South Africa.

The Institute's web site and central membership library provide members with current relevant information, publications and educational materials about allergy. For the general public, schools and children, IOA has produced books and brochures, videos, educational games and other information material. IOA also organizes and holds meetings, symposia, conferences, and workshops.

www.theucbinstituteofallergy.com

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