

GOOD ALLERGY PRACTICE

Standards of care for providers and purchasers of allergy services within the National Health Service

October 1994

Royal College of Physicians
11 St Andrews Place
Regent's Park
London NW1 4LE

Royal College of Pathologists
2 Carlton House Terrace
London SW1Y 5AF

Supported by the British Society for Allergy and Clinical Immunology and the British Allergy Foundation

Copyright © 1994 Royal College of Physicians of London
Registered Charity No 210508

ISBN 1 873240 87 2

Produced by the Publication Unit of the Royal College of Physicians in collaboration with the Royal College of Pathologists Marks & Spencer Publications Unit

Contents

Foreword by Sir Leslie Turnberg and Professor Alastair Bellingham

Summary

Introduction

What is allergy?

Which type of conditions can be helped by an allergist?

Summer hayfever

Perennial rhinitis (symptoms of a 'permanent cold')

Allergic asthma (including occupational asthma)

Allergy to stinging insects

Allergy to drugs
Allergy and the skin
Food allergy and food intolerance
Anaphylaxis
Evaluating the role of allergy in non-specific/polysymptomatic illness

Paediatric allergy

Facilities and staff required

- 1 Allergy specialists
- 2 Outpatient facilities
- 3 Skin prick tests
- 4 Patch tests
- 5 Food allergy tests
- 6 Laboratory investigations

Specific allergen injection immunotherapy (hyposensitisation)

Unconventional 'alternative' allergy

What is a good allergy clinic? Guidance for purchasers

References

Foreword

Allergy is a common and increasing cause of illness. It affects about 1 in 6 of the population and there is concern amongst the public about the facilities available for its diagnosis and treatment within the National Health Service. For these reasons 'Good Allergy Practice' has been written specifically for providers and purchasers of allergy services with the NHS. The document was developed jointly by the Royal College of Physicians and the Royal College of Pathologists, with guidance from the British Society of Allergy and Clinical Immunology and the British Allergy Foundation.

The types of patient who can be helped by an allergist are described, as are the basic facilities required for allergy diagnosis and treatment. There is a considerable number of allergy clinics under the NHS. These are usually linked to specific specialties such as chest diseases, ear, nose and throat disease, paediatrics, dermatology and gastro-enterology. Most major hospitals have facilities for allergy testing, and the British Society for Allergy and Clinical Immunology provides a regularly updated list of allergy clinics in the NHS. We hope that, after reading this document, purchasers will find the advice helpful in their choice of effective allergy services.

Leslie Tumberg
President
Royal College of Physicians

Alastair Bellingham
President
Royal College of Pathologists

Summary

Allergic diseases affect at least 15% of the population and are the cause of much ill-health. 'Clinical immunology and allergy', the term used by the Department of Health in England and Wales for this area of specialisation, is recognised as a separate specialty of medicine under the National Health Service. Many organ-based hospital consultants (eg chest physicians) have allergy as a special interest or subspecialty. Allergists deal largely with 'itch, sneeze, cough and wheeze' and so are experts in:

- summer hayfever (seasonal, allergic, conjunctivorrhinitis)
- perennial rhinitis (symptoms of a 'permanent cold')
- allergic asthma (including occupational asthma)
- allergy to stinging insects (especially wasps and bees)
- allergy to drugs
- allergy-related skin disorders, ie urticaria, angioedema, atopic eczema and contact dermatitis
- food allergy and food intolerance
- anaphylaxis (acute generalised allergic reaction)
- evaluating the role of allergy in non-specific/polysymptomatic illness.

Children with allergic disease should be under the overall care of a paediatrician since the progression of allergies in children differs from that in adults.

Good allergy practice involves teamwork by doctors, nurses and dietitians. The investigation of allergy patients includes skin tests and challenge procedures (eg food allergy tests) as well as various specialised laboratory investigations. Good clinical practice by providers and the effective use of allergy services by purchasers should improve prognosis and cut costs of treatment in allergic disease.

Introduction

This document is intended primarily for providers and purchasers of specialist allergy services within the NHS. It describes the services that the allergist can offer and makes recommendations for standards of care and good allergy practice.

Allergic diseases, particularly hayfever, allergic asthma and atopic eczema, affect at least 15% of the population and there is evidence that their prevalence is increasing. Allergic diseases are a major cause of absence from work and school. The timing of school examinations during the

grass pollen season results in significant under-achievement. Thus allergic diseases are the cause of much ill-health and represent an important socio-economic problem.

It is now appreciated that the identification of allergens, both in the home and workplace, and the implementation of avoidance measures may not only improve prognosis but can appreciably cut the cost of drugs used to suppress symptoms.

The Royal Colleges of Physicians have recently approved training programmes and allocated 12 new senior registrar posts in clinical immunology and allergy ('physician immunologists') approved by JPAC.¹ It is proposed to increase further the number of consultant physicians who have had formal training in allergy. Allergy clinics are often linked to particular specialities, such as chest diseases, ear/nose/throat disease, paediatrics, dermatology and gastroenterology, and are under the charge of a hospital consultant with specialist qualifications. There are facilities for allergy testing at many of the major hospitals.

A regularly updated list of allergy clinics in the NHS can be obtained from the British Society for Allergy and Clinical Immunology (BSACI Secretariat, Membership Services, 66 Weston Park, Thames Ditton, Surrey, KT7 0HL).

What is allergy?

Allergy is a form of exaggerated sensitivity (hypersensitivity) to a substance which is either inhaled, swallowed, injected, or comes in contact with the skin or eye. Doctors use the term allergy to describe situations where hypersensitivity results from heightened (or 'altered') reactivity of the immune system in response to external or 'foreign' substances.

Foreign substances that provoke allergies are allergens. Examples include grass, weed and tree pollens, substances present in house dust (particularly the house dust mite), fungal spores, animal products, certain foods and drugs, and various chemical agents encountered in the home and at work. Patients who develop common allergies such as hayfever are called 'atopic'. The atopic state runs in families and is genetically transmitted. Atopic individuals produce increased amounts of immunoglobulin E (IgE), a type of antibody which binds particularly avidly to mast cells. These cells are located throughout the body and release histamine and other inflammatory agents when triggered by the allergen. The common atopic conditions are hayfever, allergic (atopic) asthma and immediate (IgE-mediated) reactions to foods.

There are other conditions, which are not dependent on IgE, where abnormal immune responses to environmental agents also cause disease. Examples are certain forms of contact dermatitis, and coeliac disease. These conditions are sometimes more difficult to diagnose and treat than the common atopic allergies and are often managed by appropriate organ specialists, eg dermatologists and gastro-enterologists.

In random surveys of the population by a questionnaire, 20% had symptoms which they related to food, but this relationship could be confirmed in only one in five of those subsequently tested.² In the case of food additives the discrepancy was up to 10 times greater between those who believed themselves to be sensitive and those in whom the diagnosis was confirmed.³ Only a minority of those with symptoms have true food allergy, but in others there is as yet no evidence that the problem is associated with an alteration in the immune system. The term 'food intolerance' is preferable in such cases (see below).

Many patients present to doctors with non-specific symptoms which they mistakenly believe are due to allergy, especially to environmental agents. These views are sometimes strongly held, but allergists who see these patients may have to explain that this interpretation is incorrect. There are now a number of conditions to which an 'allergy' label has at times been attached including the chronic fatigue syndrome and certain psychological disorders.⁴ While the management of these problems may be difficult, treatment which is based on the diagnosis of 'allergy' is inappropriate.

Which conditions can be helped by an allergist?

Allergists and organ-based physicians with an interest in allergy deal largely with 'itch, sneeze, cough and wheeze' and so are experts in:

- Summer hayfever (seasonal, allergic, conjunctivorhinitis)
- Perennial rhinitis (symptoms of a 'permanent cold')
- Allergic asthma (including occupational asthma)
- Allergy to stinging insects (especially wasps and bees)
- Allergy to drugs
- Allergy-related skin disorders, ie urticaria, angioedema, atopic eczema and contact dermatitis
- Food allergy and intolerance
- Anaphylaxis
- Evaluating the role of allergy in non-specific/polysymptomatic illness.

Summer hayfever

Although most hayfever can be diagnosed and managed in general practice, the allergist may be particularly helpful in giving advice on the management of more severe disease especially when this is complicated by other allergic diseases such as asthma and eczema. The diagnosis is obtained from a typical seasonal history and supported by a positive skin prick test. Hayfever is largely due to allergy to grass pollen and, to a much lesser extent, tree and weed pollen. Moulds may occasionally cause late-summer symptoms. Although many cases of hayfever are reasonably well controlled by new non-sedating antihistamines and topical corticosteroids, allergists can advise on combination therapy for those with more severe hayfever.

Severe summer hayfever rarely requires short courses of oral corticosteroids and, in some cases, specific allergen immunotherapy (hyposensitisation or desensitisation) is recommended. Allergen immunotherapy is of proven value in the treatment of summer hayfever but the decision to treat should be made by the allergy specialist. Although allergen immunotherapy for summer hayfever may be used if there is associated mild pollen asthma, it should not be used in patients with co-existent asthma which is non-seasonal and persistent.

Allergen immunotherapy must be carried out:

- a by physicians with experience in this form of treatment (ie hospital-based allergists);
- b in carefully selected patients;
- c using high quality standardised allergen extracts licensed under the provision of the UK Medicines Act and associated European Directives;
- d with resuscitation facilities immediately available; and
- e with patients maintained under close observation for 60 minutes after injection (and for longer if even mild symptoms or signs of hypersensitivity develop).

Perennial rhinitis (symptoms of a 'permanent cold')

Chronic symptoms of a blocked runny nose and sneezing can be very troublesome and the cause(s) are sometimes difficult to diagnose accurately and treat. Infective, structural and non-allergic causes should be excluded as well as underlying immune deficiencies. Management is therefore best handled by a specialist who has access to laboratory-based diagnostic techniques.

Allergy to the house dust mite (*Dermatophagoides* spp.) is the most important cause of chronic perennial allergic rhinitis. Allergens from animals (especially cats, dogs, horses, and in some instances, mice, rats, guinea pigs, hamsters, rabbits and gerbils) are also common causes of chronic allergic disease. Chronic rhinitis can be due to allergic and/or non-allergic mechanisms including nasal polyposis with or without aspirin intolerance. From the history, examination of the nose and other investigations as appropriate, allergy can be diagnosed or excluded and advice given on non-allergic causes. Where allergens such as the house dust mite and animals are identified, the allergist can give useful advice on allergen avoidance and give recommendations on drug management of chronic rhinitis by antihistamines, local corticosteroids and agents which reduce excess mucous hypersecretion.

Allergic asthma (including occupational asthma)

Asthma is amongst the commonest chronic diseases in developed countries. The importance of allergy, particularly allergy to the house dust mite, in an individual case of asthma is frequently underestimated or ignored. The allergist or respiratory physician with an interest in allergy can help to identify the importance of allergens and other triggers and so institute avoidance measures. The treatment of asthma in adults and children should follow the recently published Guidelines on the management of asthma prepared by the British Thoracic Society and others,⁵ and the consensus statement of the International Pediatric Consensus Group.⁶ The recommendations of these authorities include:

- minimising exposure to known environmental triggers, including atmospheric pollution;
- approaching treatment in a stepwise manner;
- ensuring compliance; and
- ensuring that patients or their parents or carers understand and are actively involved in the management of symptoms.

In addition to avoidance measures the allergist and/or respiratory physician will use drugs for prevention of recurrent attacks, and drugs for the relief of acute wheeze.

Occupational asthma due to inhalation of sensitising agents occurring in the workplace is particularly important because the condition is often missed and can be very severe. The substances that cause occupational asthma include low molecular weight chemicals, wood dusts, and castor and soya bean dust. An accurate diagnosis of occupational asthma is essential, especially as sufferers may be eligible for industrial compensation, and requires a careful history as well as familiarity with the chemical and other substances involved and how they are used in the workplace. The diagnosis is sometimes confirmed by finding specific IgE to the allergen, by serial peak flow monitoring at and away from work, or by the use of challenge facilities that are only available in specialised units.

Testing for allergy is also occasionally practised in occupational health units in industries where employees may be exposed to allergenic material. For example skin prick tests may be carried out using extracts of specific respiratory sensitisers.

Allergists, working with chest physicians can also advise on the diagnosis and management of other allergic lung diseases including extrinsic allergic alveolitis, allergic bronchopulmonary aspergillosis and other forms of pulmonary eosinophilia.

Allergy to stinging insects

Allergists have a special role in the diagnosis and management of patients who have suffered systemic reactions following a wasp or bee sting. Since allergy to wasp and bee venom may lead to general anaphylaxis and death, patients need to be considered for specific allergen immunotherapy in order to give protection against further stings. The decision on whether to institute immunotherapy for an individual patient requires special experience but is dependent

essentially on the clinical history and the identification of specific IgE antibody. Until full protection has been achieved patients need instruction in the self-administration of adrenaline.

Allergy to drugs

Adverse reactions to drugs pose a serious and common medical problem. Generally speaking, a precise clinical history is the most immediate but not the only method of establishing a diagnosis of an adverse reaction to a drug and, whether the cause is drug toxicity or allergy, it may be important to avoid the drug in question and others likely to cross-react.

Drug allergy may be due not only to the active ingredient but to additives and/or colouring agents used in the formulation. Accurate diagnosis sometimes requires challenge testing, especially as drug allergy is frequently overdiagnosed (examples include allergy to local anaesthetic and penicillin allergy). Indeed, an important role of the allergist is the confident exclusion of supposed allergy to drugs, and therefore the avoidance of unnecessary restrictions. Thus, the allergist can provide a useful service in drug allergy diagnosis and management.

Anaphylaxis of unknown origin requires specialist investigations and is sometimes found to be drug-related.

Allergy and the skin

In many centres allergists work together with dermatologists giving advice on the investigations and management of certain skin disorders where allergic mechanisms may play a role. For example, atopic eczema often occurs with other atopic manifestations such as allergic rhinitis and asthma. In these situations clinical allergists may be particularly helpful in the overall management of the atopic diathesis. Dietary factors are often important in exacerbation of atopic eczema in infants and young children. Clinical allergists working with paediatricians and paediatric dietitians can give advice on dietary elimination, for instance where cows' milk or egg are suspected to be important triggers. Contact with the house dust mite and with animals may also aggravate atopic eczema in certain individuals. Patients with urticaria and/or angioedema can be referred to the clinical allergist or dermatologist where allergic or immunological factors (eg, C1 esterase inhibitor deficiency) need to be identified. Expert advice is often required for the short- and long-term management of severe angioedema, especially when there is laryngeal involvement.

Many cases of contact dermatitis are allergic, although the distinction between allergy and irritation can be difficult. Depending on the centre, allergists and/or dermatologists can institute appropriate diagnostic procedures, ie, carry out patch tests, give advice on allergen avoidance, and institute treatment with drugs.

Food allergy and food intolerance

Food allergy is one of the most controversial subjects in the practice of allergy. This has arisen because of lack of a universal agreement on definitions and diagnostic criteria. Many adverse reactions do not involve the immune system and are therefore not allergic in the classical sense. For this reason the more embracing term 'food intolerance' is preferred in cases where the mechanism is uncertain. The various forms of food intolerance and allergy were classified in the Royal College of Physicians report entitled *Allergy: conventional and alternative concepts*.⁷

Food allergy involving IgE, ie the immediate and sometimes violent reactions to nuts, eggs, milk and shellfish, should be managed by the allergist. The foods involved are identified from the clinical history and confirmed by skin prick testing or the detection of allergen-specific IgE in the serum. The management is advice on avoidance, and the treatment of acute severe reactions. Acute generalised allergic reaction (anaphylaxis) of obscure origin is sometimes caused by food. Allergists may advise on the use of adrenaline for self-injection, given in the same way as for anaphylactic reactions to insect stings. It is particularly important that food allergy is not diagnosed without clear and strong indications, since needless dietary restrictions may not only disrupt the patient's life and cause malnutrition but can also seriously affect the whole family. Food challenges should not be performed in patients who have a clear cut clinical history of immediate or acute allergic (anaphylactic) reactions. However, in other patients where food hypersensitivity is suspected, the history may be less clear and sometimes vague.

More rigorous investigations are thus required and, depending on the centre involved, referral to an allergist might be appropriate. Often diagnostic exclusion diets are needed, followed by the re-introduction of foods whilst symptoms are monitored (eg by diary card or peak expiratory flow rate). Investigations such as the placebo-controlled, double-blind food challenge may also be indicated, which in rare instances, may involve hospital admission.

More common are the wide variety of non-allergic food intolerance reactions to foods affecting certain susceptible individuals. Examples include some 'irritable bowel' symptoms (notably in lactase deficiency), food-induced migraine, reactions to sulphites or nitrites and others as outlined in the Royal College of Physicians report.⁷ Here the allergist can be particularly helpful in establishing that symptoms are indeed food induced and are not caused by psychological factors.⁴

Anaphylaxis

Anaphylaxis (an acute severe generalised allergic reaction) is a life-threatening condition. There is currently considerable concern regarding anaphylactic reactions in association with certain foods, particularly peanuts. The allergist will be able to contribute, not only by making the diagnosis and excluding other causes of sudden loss of consciousness (for example, cardiac arrhythmias or vasovagal attacks), but by educating the patients, and by educating other physicians in the correct management of these patients. In some instances, the cause of the

anaphylactic attack (eg bee or wasp stings, certain foods and drugs) will be clear from the history and investigations. However, there will be a group of individuals who have anaphylaxis, for which a specific cause cannot be identified. The reason for such unexplained and serious attacks may not become apparent until a later date and these individuals need to be followed up, sometimes for a considerable period of time. In the presence of a good history and an obvious provoking factor, avoidance is the best policy. For all patients, including those in whom a trigger factor cannot be clearly defined, advice should be given on emergency treatment, ie the correct use of adrenaline by self-administration. Registration in organisations such as Medic-Alert is also advised.

Evaluating the role of allergy in non-specific/polysymptomatic illness

Allergists can provide an important service in evaluating the role of allergy in the cause of non-specific or polysymptomatic illnesses. In addition, the general practitioner or purchaser may face a request for referral to a specialist by a patient who has a large number of poorly defined symptoms or by a patient who is convinced that symptoms are related to an underlying 'allergic' process, often given misleading titles such as multiple chemical sensitivities, environmental illness, or total allergy syndrome. In some instances a relationship (ie between caffeine and headaches) can be established but often allergy can be effectively excluded and non-allergic causes of symptoms have to be considered. For example, some patients may 'somatize', that is experience psychological distress which leads to physical symptoms for which they seek medical advice. Some may have recognisable disorders such as depression but have been resistant to seeking, or accepting, psychiatric help. These patients require early diagnosis, sympathetic and tactful handling and the institution of appropriate treatment and/or referral to a psychiatrist to avoid unnecessary and costly prolonged allergy consultations and allergy tests.⁴

Paediatric allergy

Allergic diseases are particularly important in children, and paediatricians should always be involved in the diagnosis and management of children referred for specialist care. However, although paediatricians have allergy as part of their general training, they may in individual cases decide to consult with, or refer a child to, an adult allergy specialist. The progression of allergies in children differs from those in adults, eg food allergies and insect venom anaphylaxis. Drug treatments are different for children both in dosage and side effects. The inherent dangers of unnecessary dietary restriction for treatment of some types of allergic diseases are far greater in children because of disturbances in nutrition and growth, and expert paediatric dietetic advice is usually required. Techniques for cardiopulmonary resuscitation after anaphylaxis are not the same as those in adults.

There appears to be widespread public misunderstanding about the contribution of allergies to diverse children's diseases such as hyperactivity, other forms of behavioural disorder, recurrent

abdominal pain and chronic headaches. It is essential that such children are seen by paediatricians within the framework of a comprehensive children's department.

Facilities and staff required

1 Allergy specialists

There is, as in any specialty, an overlap between allergy and other organ specialties. Hospital-based allergy specialists within the NHS will usually be of consultant status and have appropriate specialty training and experience. They will either be 'physician immunologists,' ie trained in the newly recognised specialty of clinical immunology and allergy, or be organ-based specialists with an interest in allergy. There is a need for at least one specialist in clinical immunology and allergy for every three health districts (or approximately 750,000 population or one commission).¹ Health districts that do not have a physician immunologist should have an organ-based specialist with an interest in allergy.

2 Outpatient facilities

- Hospitals should have designated areas for adult and paediatric allergy clinics organised by appropriately trained staff.
- Allergy consultations are often very time-consuming and therefore a well organised appointments system is needed. An average consultation time for a new patient should be at least 30 minutes. For follow-up visits it is recommended that no doctor should see more than four patients in an hour. There must be sufficient weekly outpatient sessions to allow consultants to cover the workload. Patients should be seen, or have their cases discussed with, the consultant at the first visit and on regular occasions when follow-up attendance is needed. Allergy clinics provide opportunities for training, usually at senior registrar, but occasionally at registrar level.
- Facilities are required for skin testing, spirometry (including peak flow measurements), supervision of a patient's inhaler technique, the provision of asthma education and advice on the avoidance of allergens, instruction in self-administration of adrenaline, and facilities for allergen injection immunotherapy with an appropriate observation area.

Note: With allergen injection immunotherapy there must be immediate access to resuscitative facilities, and patients should be observed for 60 minutes (longer if even mild symptoms of hypersensitivity reactions develop).

- Where appropriate, facilities should also be available for patients to have a chest x-ray at the time of the clinic visit and for the radiographic film to be available for the consultation.
- The support of an allergy clinic nurse is strongly recommended. Nurses with appropriate training can sometimes assist in obtaining an allergy history. They can also perform skin tests

and give effective advice on environmental control (eg on minimising exposure to the house dust mite).

- The services of qualified adult and paediatric dietitians should also be available, especially in clinics which deal with many cases of food allergy. Dietitians give detailed advice on exclusion diets, commonly milk and milk products, egg, wheat and other foods as indicated by the history and investigations. They also assess the adequacy of diets that patients have used at their own or other's instigation and advise on the reintroduction of foods that have been withdrawn from the diet with minimal indication of intolerance, or which may now be tolerated. Advice is also given on diets that reduce colourants, additives or salicylates when indicated.
- Special facilities at regional centres should include facilities for measurement of non-specific bronchial hyperresponsiveness (for example by means of inhalation) and challenge chambers for use with occupational agents (and occasionally common aeroallergens).

3 *Skin prick tests*

A diagnosis of allergy is based first and foremost on a careful clinical history. Skin tests should be used to support (or otherwise) a diagnosis of allergy. The skin prick test is the method of choice for the diagnosis of immediate-type hypersensitivity. In general, allergy testing by intradermal injection is not recommended, although it is sometimes used in venom allergy diagnosis. Skin test solutions must be standardised (biological standardisation is the most reliable) and should have a UK product licence. There are a number of recognised skin prick test solutions which are required to confirm or exclude atopy, and to identify the offending allergens. In the UK nearly all atopic subjects will give a positive reaction to an extract of one or more of the following:

- grass pollen;
- tree pollen;
- house dust mite; and
- cat and dog.

These are the commonest allergens in allergic rhinitis and allergic asthma.

A positive (histamine 10 mg/ml) and negative (diluent) control must always be included when performing skin prick tests. A positive reaction is usually regarded as being 2 mm or greater than the negative control.

Other skin test solutions can be used less frequently, ie when suggested by the clinical history. These include moulds (eg *Alternaria*, *Cladosporium*), weeds, certain foods (eg egg, milk, some nuts, fish and shellfish, where skin test solutions are known to have an established value), stinging insects (eg bee and wasp venom), drugs (eg penicillin derivatives, anaesthetic agents) and other animals (eg horse, hamster).

4 *Patch tests*

Most cases of contact dermatitis are irritant dermatitis but up to 40% are due to cell-mediated allergy, and the sensitising agent can be identified by patch testing. Though ostensibly simple, this procedure requires a comprehensive knowledge of the different chemical allergens to which patients are exposed in specific work and leisure activities, as well as the nature of cross-reacting chemicals. Interpretation of allergic versus irritant reactions and the appraisal of the significance of patch test results can be difficult even for clinicians experienced in this technique.

Allergists or dermatologists can best advise on avoidance and the appropriate topical and/or systemic treatment.

5 *Food allergy tests*

Facilities should be available for open exclusion and reintroduction of food for allergy diagnosis as well as double-blind, placebo-controlled tests to identify or disprove food intolerance by giving suspected foods in disguised forms. For this purpose some pharmacies at specialist centres stock foodstuffs contained in special capsules, with placebo controls of similar appearance.

6 *Laboratory investigations*

Allergists should have access to routine haematology and biochemistry services as well as to certain immunological tests. If immunology tests are not available at each district general hospital then facilities should exist to refer them to an appropriate regional immunology centre with consultant (or equivalent) immunologist advice and CPA (UK) Ltd accreditation.

The most commonly used serological allergy tests are measurements of total and specific IgE antibodies to allergens relevant to the patient's symptoms. A normal total IgE level does not exclude a diagnosis of allergy. Requests for such tests must include a summary of the patient's symptoms since these tests are relatively expensive and are often unnecessary. They are useful:

- when patients have been taking antihistamines which suppress the skin test reaction;
- in patients with skin disease which is so extensive that skin tests are difficult to perform or where there is dermographism;
- where the results of skin tests are equivocal or where there is a history of anaphylaxis.

A positive specific IgE antibody test indicates a level of biological sensitivity to the appropriate allergen, which may persist in the absence of symptoms. Therefore, as with skin tests, the results must be interpreted in the context of the patient's history.

Other laboratory tests which are sometimes required as part of an allergy service include serum immunoglobulin levels (IgG, IgG subclasses, IgA, IgM); complement analyses including

immunochemical and functional measurements of the C1 esterase inhibitor; IgG antibodies (for example, precipitin tests) to fungal and avian products and other relevant material for use in the diagnosis of extrinsic allergic alveolitis. Very occasionally specialist tests may be appropriate, eg lymphocyte transformation for drug and venom allergy, measurements of urinary and plasma mediators such as histamine.

Specific allergen injection immunotherapy (hyposensitisation)

A Working Party of the British Society for Allergy and Clinical Immunology has recently considered the current status of allergen immunotherapy in detail.⁸ A modified summary of their recommendations is as follows:

- 1 Specific allergen injection immunotherapy (IT) should be used on a routine basis
- 2 Specific allergen immunotherapy should be undertaken using only high quality standardised allergen extracts licensed under the provision of the UK Medicines Act and associated European Directives.
- 3 Specific allergen immunotherapy should be administered only by doctors with experience and training in immunotherapy either in hospitals, or in specialised clinics. Adrenaline should always be immediately available and there should be easy access to resuscitative facilities. Attendant staff should be trained in resuscitative techniques.
- 4 Patients should be kept under close supervision for the first 60 minutes after each injection. This period should be extended if the patient has any generalised symptoms however mild. A severe or prolonged adverse reaction may necessitate hospital admission.
- 5 Severe generalised reactions are to be recorded and reported to the Committee for Safety of Medicines, with accurate details on the product(s) used, the indications for use, the nature, evidence of severity and timing of the reaction(s), treatment and response.
- 6 Specific allergen immunotherapy can be used in mild pollen asthma but is not recommended for the treatment of current, ongoing perennial asthma. Since hypersensitivity to wasp and bee venoms can be life-threatening in some patients, in these situations asthma is not an absolute contra-indication. Immunotherapy is not recommended in non-allergic rhinitis, non-allergic asthma, atopic dermatitis, chronic urticaria, food hypersensitivity or drug and chemical hypersensitivities.
- 7 Whole body extracts of stinging insects, allergen extracts prepared from foods, feathers, synthetic materials, bacterial extracts, gums and glues, enzymes and

occupational allergens should not be used. Vaccines prepared from multiple, unrelated allergens are not recommended.

- 8 Extracts prepared from mould spores, animal danders, the house dust mite (*Dermatophagoides* spp.) and locusts are also not recommended for use at present.
- 9 All allergy extracts (for skin testing as well as immunotherapy) should be biologically standardised and doctors should avoid changes from products of one company to another during the course of treatment.
- 10 These recommendations should be regularly revised and modified, as necessary, in the light of new information.

Unconventional ('alternative') allergy

There are a number of practitioners who routinely use unconventional approaches to the diagnosis and treatment of allergy. Allergy, particularly 'alternative allergy,' is a popular subject with the media. Unfortunately many members of the public and even doctors themselves are often uncertain as to what forms of diagnosis and treatment have been validated by objective studies. Until the methods of diagnosis and treatment used by 'alternative' allergists have been evaluated by reputable, randomised, double-blind placebo-controlled trials, they cannot be accepted into routine clinical practice. This is particularly important since symptoms in chronic allergic disease are known to fluctuate over time and can often improve when treated with placebo. The more prominent of the methods of alternative allergists have been assessed in detail and the conclusions published in a Royal College of Physicians report.⁷

Although controlled clinical trials of homoeopathy and enzyme-potentiated desensitisation in hayfever, and of hypnosis and acupuncture in the treatment of asthma have shown marginal benefit, these observations need to be confirmed by large-scale trials before they can be generally accepted as being efficacious. These methods will need to be compared with conventional forms of treatment before their use is recommended in the management of allergic diseases. Thus, only treatments of proven efficacy should be used.

A group of individuals who practise 'environmental medicine,' who call themselves 'clinical ecologists' believe in disorders variously termed 'multiple chemical sensitivity', 'environmental illness', 'chemical hypersensitivity syndrome' or 'total allergy syndrome'. Diagnostic testing makes use of the neutralisation-provocation test (the Miller technique) and, based on the results, treatment involves the administration of many food extracts or other substances ('neutralisation vaccines'), given by injections or by sublingual drops. Patients are sometimes segregated in environmental control units. Current data on the relationship between polysymptomatic illness and exposure to chemicals do not allow multiple chemical sensitivity to be regarded as a distinct clinical entity. Furthermore, the claims of clinical ecologists have been thoroughly evaluated and

found to be of no proven value by many authorities, including the Royal College of Physicians⁷ and the American Council on Science and Health.⁹

Alternative allergists also use other diagnostic tests such as leucocytotoxic tests, hair analysis, Vega testing, applied kinesiology, and the auricular cardiac reflex method. These have no place in the diagnosis of allergy.⁷

Treatments have also been based on the diagnosis of candida hypersensitivity syndrome, and allergy to mercury or dental amalgam. There is no valid evidence to support this approach or to support the claim that the chronic (post-viral) fatigue syndrome or myalgic encephalomyelitis are the result of, or are exacerbated by, allergy, candida infection or dietary factors.

During the past decade scientists have achieved outstanding success in increasing our understanding of allergic disease at the molecular, cellular and clinical levels and these achievements have been translated into improved methods of diagnosis and treatment. All treatments, whether 'conventional' or 'alternative' must be assessed rigorously before being recommended to, or provided for, patients.

What is a good allergy clinic? Guidance for purchasers

When contracting for allergy services purchasers should satisfy themselves that allergy clinics have appropriate expertise in the area of allergy concerned, with adequate staff and facilities, and that they comply as follows:

- 1 The person in charge of an allergy clinic should be of consultant status and have had approved higher medical training in an allergy-related field, ie be a specialist in clinical immunology with appropriate allergy training, or an organ-based specialist with an interest in allergy.
- 2 There should be adequate support staff which would normally include an allergy clinic nurse and access to a qualified dietitian.
- 3 There should be facilities for skin testing and access to an approved laboratory for investigations such as measurements of specific IgE antibodies and other immunological tests as appropriate.
- 4 Allergy clinics which offer allergen injection immunotherapy should follow the guidelines outlined on pages 15–16.
- 5 Allergy clinics should use methods of diagnosis and treatment of proven efficacy. Clinics which use methods of diagnosis and treatment outlined in the section on 'alternative' allergy are specifically not recommended.

References

- 1 Physician immunologist: future role and manpower needs. Report by Royal College of Physicians Committee on Clinical Immunology. *Clinical and Experimental Immunology* 1987; 70:664–675.
- 2 Young E, Stoneham MD, Petruckevitch A, Barton J, Rona R. A population study of food intolerance. *Lancet* 1994; 343:1127–1130.
- 3 Young E, Patel S, Stoneham M, Rona R, Wilkinson JD. The prevalence of reactions to food additives in a survey population. *Journal of the Royal College of Physicians (Lond)* 1987; 21:241–247.
- 4 Howard LM, Wessely S. The psychology of multiple allergy. *British Medical Journal* 1993; 307:747–748.
- 5 Guidelines on the management of asthma. Statement by the British Thoracic Society, the British Paediatric Association, the Research Unit of the Royal College of Physicians of London, the King's Fund Centre, the National Asthma Campaign, the Royal College of General Practitioners in Asthma Group, the British Association of Accident and Emergency Medicine, and the British Paediatric Respiratory Group. *Thorax* 1993; 48 (2 Supplement):S1–24.
- 6 Warner JO, Gotz M, Landau LI, Levison H, Milner AO, Petersen S, Silverman M. Management of asthma: a consensus statement. *Archives of Diseases in Childhood* 1989; 64:1065–1079; and International Pediatric Consensus Group. Asthma: a follow-up statement from an International Consensus Group. *Archives of Diseases in Childhood* 1992; 67:240–248.
- 7 Allergy: conventional and alternative concepts. Report by Royal College of Physicians Committee on Clinical Immunology and Allergy. London: RCP. April 1992.
- 8 Allergen immunotherapy. Position paper by the British Society of Allergy and Clinical Immunology. *Clinical and Experimental Allergy* 1993; 23:Supplement 3.
- 9 Barret S (ed). Multiple chemical sensitivity. Report by American Council on Science and Health. New York; February 1994.