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THE

ALLERGY ENCYCLOPEDIA

EDITED BY

THE ASTHMA &
ALLERGY FOUNDATION OF AMERICA
AND CRAIG T. NORBACK

PREPARED BY DOCTORS—
THE ONLY COMPLETE
MEDICAL GUIDE
TO CAUSES, SYMPTOMS,
TREATMENTS, CURES, DIET, CLINICS,
CAMPS, ORGANIZATIONS

THE

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Consulting Editor
Raymond G. Slavin, M.D.



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**DOES YOUR NOSE RUN CONTINUOUSLY
FROM THE MOMENT THE FIRST BUDS
APPEAR ON THE TREES?**

**DO YOU BREAK OUT IN HIVES AND START
TO ITCH WHENEVER YOU EAT CERTAIN
FOODS?**

**DO YOU FIND YOURSELF WHEEZING
AFTER BRIEF PERIODS OF EXERCISE?**

**DO YOUR EYES FREQUENTLY FEEL ITCHY
AND WATERY?**

If you have experienced any or all of these reactions, you are probably one of the more than 35 million Americans who suffer from allergies or asthma. You may have been born with certain allergies; you may develop them later in life; you may even develop immunity to one irritant only to find yourself suddenly sensitized to another. Pollens, foods, mold spores, insects, animals, and medications are just a few of the things that may provoke allergic reactions. But now you can find out everything you need to know about symptoms, causes, treatments, and where to go for help in

THE ALLERGY ENCYCLOPEDIA

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Foreword

This book is dedicated to the thirty-five million Americans (and their families) who suffer from allergies. Allergies are the most common form of chronic disease in the United States. Nine million Americans suffer from asthma, almost fifteen million have hay fever, and another twelve million have such allergic diseases as eczema, hives, angioedema, food and drug sensitivity, and insect sting hypersensitivity. All told, 17 percent of Americans are allergic to some degree. Clearly, we are dealing with a condition with enormous importance to public health.

The impact of these diseases is considerable. In some cases, the financial burden may overwhelm families. The total cost of allergic diseases to American society as a whole has been estimated at more than \$1 billion. The direct cost—including physician services, hospital care, and medication—is \$850 million; the indirect cost, such as days lost from work, runs into the hundreds of millions of dollars.

Other, more subtle, costs are involved, which have to do with the quality of life for Americans. Activity is often restricted, work may have to be limited to certain areas, and both physical and emotional growth may be retarded. The special demands of an allergic person can place a substantial strain on his or her family. Vacations must be restricted, family income diverted, and activity around the home limited—all of which can affect the nonallergic members of a family almost as much as the allergic one. Is it any wonder, then, that the divorce rate among allergic families is significantly higher than it is among families without allergic members?

The Allergy Encyclopedia is designed to provide the allergy sufferer, as well as friends and families, with an overall view of this common, complex group of diseases. With knowledge comes understanding. Our hope is that the distinguished doctors represented in this encyclopedia have accomplished their mission to dispel myths and provide readers with up-to-date, readable, and medically accurate information.

To understand and control allergic diseases, we must first understand the immune system. Dr. Levy sets the stage with a clear exposition of immunology—the basic science of allergy. Dr. Solomon discusses regional factors in allergy and provides the reader with an overview of the various inhalants around the country that may be responsible for allergic diseases. A guide to allergies by doctors Lopez and Salvaggio, in glossary form, defines the terms most often encountered. Drugs commonly used to treat allergies are covered by Dr. Golbert, and the most serious of the allergic diseases—namely, allergic emergencies—are covered by Dr. Novey. Dr. Shapiro describes research in immunology and discusses the various approaches to the treatment of allergies, showing graphically how scientists in the laboratory are attempting to provide the basic information that could lead to clinical advances in diagnosis and treatment. A separate chapter is devoted to questions frequently asked about allergic diseases. Finally, a special effort has been made in this book to provide information of practical use to the reader. Included are a listing of allergy associations, summer camps, residential centers, and hospitals, as well as diets and cooking hints and a suggested reading list.

This Foreword would not be complete without mention of The Asthma & Allergy Foundation of America, the major national voluntary health organization concerned with these widespread immunologic diseases. A nonprofit organization formed over thirty years ago, AAFA's goal is the control and cure of asthma and allergic disease through stimulating growth in the science of immunology; training future leaders in allergy and immunology; aiding the continuing medical education of physicians and other health care providers; and, most important, creating more—and more informed—choices for over 35 million sufferers, their families, and friends. AAFA supports the scientific studies of brilliant physician-scientists in immunology through financial awards, aids specialized clinical training in immunology with annual fellowships, helps sponsor continuing medical education programs at leading medical institutions, works at the grassroots to support and educate patients and families, and conducts local and national drives to raise public concern and financial support for healthier Americans with asthma and allergic diseases. AAFA's Medical-Scientific Council, its source of current scientific and professional knowledge, is a service of the American Academy of Allergy and Immunology. The address of the Headquarters Office of AAFA, which strongly deserves our support, is: 1302 18th Street NW, Suite 303, Washington, D.C. 20036. (A list of AAFA chapters is found on pages 242-243.)

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We wish to make a special acknowledgment to the late Dr. Francis Cabot Lowell, who at the time of his death was consulting editor of this volume. Long associated with the allergy unit of Massachusetts General Hospital, Boston, and with Harvard Medical School, Dr. Lowell had begun to bring his lifetime of expertise to this book, as he did to his work generally. He will be missed.

THE

ALLERGY
ENCYCLOPEDIA

Contents

CONTRIBUTORS	vii
FOREWORD	ix
ACKNOWLEDGMENTS	xi
1 □ Questions Frequently Asked About Allergies	1
2 □ Allergies, Allergens, and Related Terms—A Guide <i>by Manuel Lopez, M.D., and John E. Salvaggio, M.D.</i>	14
3 □ Allergy Emergencies and How to Cope with Them <i>by Harold S. Novey, M.D.</i>	64
4 □ Allergic Diseases and Their Treatment <i>by Thomas M. Golbert, M.D.</i>	85
5 □ Immunology—The Basic Science of Allergy <i>by David A. Levy, M.D.</i>	101
6 □ Allergy Research <i>by Gail G. Shapiro, M.D.</i>	124
7 □ Regional Factors in Allergy <i>by William R. Solomon, M.D.</i>	143
8 □ Food Allergies and Allergy Cooking	161
9 □ All About Asthma <i>by Sheldon L. Spector, M.D.</i>	205
APPENDIX A Allergy Centers, Clinics, and Long-Term Care for Asthmatic Children	227

vi □ **CONTENTS**

APPENDIX B	Summer Camps for Allergic and Asthmatic Children	234
APPENDIX C	Allergy Associations	240
INDEX		245

Questions Frequently Asked about Allergies

Allergic Diseases

Just what is an allergy?

An allergy is an abnormal reaction to an ordinarily harmless substance or substances. These substances, called allergens, may be inhaled, swallowed, injected, or contacted by the skin.

What are some common allergens?

There are many possible allergens. For example: pollen, mold, and house dust; animal dander (skin shed by dogs, cats, horses, rabbits, and so on); feathers (as in old-fashioned pillows); kapok, wool, dyes, and industrial chemicals; foods and medicines; and insect stings.

What does an allergen do in the body?

When an allergen is absorbed into the bloodstream, it stimulates certain small white blood cells called lymphocytes to produce special substances known as allergic antibodies. These antibodies react with the allergen and produce allergic inflammation and irritation in particularly sensitive areas of the body, such as the nose, eyes, lungs, or digestive system. This sensitivity is not present at first contact with the allergen; instead, it may develop after repeated exposure. For example, a new cat may not cause allergy until it has been living in a house for many months. Eventually, a susceptible person becomes sensitized and develops a stuffy nose and sneezing or wheezing on further contact with the cat.

What are some allergic diseases?

Allergic diseases or reactions can involve any part of the body. The parts, or systems, most frequently involved are the respiratory system, where an allergic reaction may take the form of hay fever (allergic rhinitis) and asthma, and the skin, where a reaction can take the form of allergic dermatitis or atopic eczema, contact dermatitis (for

example, poison ivy), or hives (urticaria). An allergic disease may also be a factor in numerous other diseases.

Hay fever is caused by allergy to the pollen of trees, grasses, weeds, or molds, or any combination of these. Depending on the section of the United States (unless otherwise indicated, this means the continental United States) and the pollinating periods, it may occur in the spring, summer, or fall, and it may last until the first frost. The hay fever sufferer has spells of sneezing, itching, weeping eyes, running nose, and a burning sensation in the palate and throat.

Allergic rhinitis is a general term that applies to anyone with nasal congestion, sneezing, and a running nose—all caused by allergies. This may be a seasonal problem, as with hay fever, or it may be a year-round problem caused by other allergens such as house dust, animal dander, and perhaps some foods. Because allergic rhinitis is frequently confused with sinusitis, patients with constant nasal symptoms should be evaluated for allergies.

Asthma is a condition characterized by coughing, wheezing, and difficulty breathing. It is frequently, but not invariably, associated with a family history of allergy. Any of the previously mentioned allergens can precipitate asthma attacks. Infections of the sinuses or the bronchial tubes may also be an important factor. Asthma patients are adversely affected by such "nonspecific" factors as air pollutants, cigarette smoke, and fumes. Their own emotions sometimes come into play. Asthma may begin at any age. If neglected, it tends to recur and become chronic.

Allergic dermatitis, or *eczema*, is a noncontagious, itchy rash that often occurs in the creases of the arms, legs, and neck, although it sometimes covers the entire body. The condition is frequently associated with allergies, and substances to which a person is sensitive can aggravate it. Foods are known to cause allergic dermatitis. A family history of allergy is thought to be a factor in its occurrence.

Contact dermatitis is a rash caused by direct skin contact with any of a variety of substances—animal, plant, chemical, or mineral. The most common cause is poison ivy.

Urticaria, or *hives*, is an outbreak on the skin of itchy welts of varying size. When the welts are large and invade deeper tissues, they are called angioedema. They may develop on the face, lips, tongue, throat, eyes, ears, or even internally. Allergies to food or drugs (especially penicillin) are well-known causes, but hives may also result from an underlying disease, or the disease may occur after emotional stress. Sometimes the exact cause cannot be determined.

Is a particular age group prone to allergy?

No. Allergy may develop in people of any age. Even infants some-

times exhibit symptoms of allergy, and some people experience their first attacks of allergy in middle age or later. Nevertheless, children are more likely to develop allergies than are people later in life.

Do many people suffer from allergic diseases?

Statistics compiled by the National Institute of Allergy and Infectious Diseases show that thirty-five million people suffer from allergy and that nine million of this group have asthma.

Allergy Diagnosis, Treatment, and Prevention

Is early diagnosis important?

Yes. Asthma in childhood, if neglected, can lead to serious, disabling lung disease in adult life. Unfortunately, the notion that an asthmatic child will outgrow the condition is not true. Asthma that is not diagnosed early and treated effectively can lead to physical retardation and personality problems that will handicap the child throughout life. Early diagnosis and treatment, not only in children but in adults as well, can prevent serious complications later on.

How do I find out what caused my allergy?

Your doctor, in addition to taking a thorough history of your illness, may make a study of your home and work environment, your diet, and your living habits. The doctor will also give you a physical examination and run some laboratory tests. Using extracts of common allergens, the doctor may perform various skin tests to ascertain allergies to specific allergens. After reviewing the family history, giving an examination, and running skin tests, the physician will be able to determine whether you have an allergy or allergies and, if so, what allergens are involved. This requires planning, skill, and patience. An accurate diagnosis cannot be obtained simply by performing allergy tests alone, as is done in some testing laboratories.

What can I—or anyone—do about an allergic disease?

Whenever allergens in a patient's environment can be isolated, they should. This is fairly easy when a feather pillow or dust-catching furniture is the problem. When a person is sensitive to a cat, dog, or bird, however, removing the allergen source may not be easy because of an emotional attachment. It can be done, though, by using patience and compassion and by explaining the risk of keeping the pet. If foods are the cause of the difficulty, they must be eliminated from the diet.

The timing and proper use of medications are important in treat-

ing allergic disease. A medical doctor must prescribe the medications and their dosages. Numerous medications are now available that are helpful both in preventing symptoms and in providing relief from them. They may be all that is needed in cases of mild allergy. If symptoms persist despite the proper use of medications and the removal of allergens from the environment, immunizing injections may be necessary to control the disease.

Is good general health important?

Yes. The best way to achieve and maintain good health is with a balanced diet and a well-rounded program of exercise, recreation, and rest. Smoking is extremely harmful and, in the case of the allergy sufferer, must be avoided. Although these measures will not cure an allergy, they do contribute to better resistance.

People say allergy is psychosomatic. Is this true?

It is true that such emotions as anxiety, fear, anger, and strong excitement can precipitate allergic attacks or make an existing condition suddenly worse. This is not to say, however, that these emotions are the physical basis of the allergy—which is real and of primary importance to people with allergies. Few patients need psychological help, but a child with severe asthma may cause serious disturbance in family life. In such cases, counselling for other members of the patient's family is of great benefit as an auxiliary to medical treatment. In general, the allergic patient is better off in an atmosphere of calm and confidence. Parents of asthmatic children should, as much as possible, maintain an attitude of calm and reassurance. The allergic child should be encouraged to be self-reliant and to take part in all activities to the extent possible.

Would a change of climate benefit me?

A hay fever victim may find relief by moving to an area where the offending allergen, pollen, or mold is not present. Some asthmatics, especially those whose asthma is caused by infection or complicated by it, may benefit from a warm, dry climate. Before a change of climate is recommended, however, the climate sought should be studied thoroughly and comprehensively. The change itself is not as important as proper treatment and, where possible, removal of the allergen. In most cases, moving to another area does not cause the allergy problem to improve. When a move is not practical—for economic, professional, or other reasons—air-conditioning and such other home-filtration devices as electronic air cleaners may be helpful. Working against air pollution through citizen clean air groups is another, al-

be it more long-range, way to reduce airborne allergens in one's own community.

Can allergic disease be prevented?

Generally, people who are aware of their problems can avoid offending allergens by not walking or driving in the country during the pollen season; by avoiding drafts and exposure to cold, damp air; by keeping away from house dust; by trying not to breathe the fumes of paint, insecticides, or products containing irritants; by not using or coming in contact with aerosols, cosmetics, dyes, or strong cleansers. Allergic people should strive to keep in good physical condition and to avoid emotional tension and fatigue. When they occur, respiratory infections should be taken seriously and treated early. It is especially important that parents watch children for allergic tendencies.

Foods are a common cause of allergy in infancy. Breast milk is preferable to cow's milk in potentially allergic children. Eggs, raw vegetables, and fruits should be added to the diet one at a time, and the child's reaction should be monitored. Bedrooms and play areas should be as dust-free as possible, and dogs and cats should be avoided.

Is it dangerous to ignore an allergy?

In some cases, yes. Severe hay fever, if left untreated, can lead to nasal polyps and sinusitis. Patients with allergic rhinitis who also have nasal polyps should undergo allergic evaluation and therapy to help prevent further growth of the polyps. Allergic dermatitis, or eczema, that is not treated early can spread and occasionally be complicated by secondary infection. The patient who originally has only occasional periods of asthma may develop a chronic condition. If the allergies are detected early, however, and appropriate treatment is begun, the condition may improve or at least be controlled.

Can an allergy be fatal?

Allergic disorders are seldom fatal, though it is estimated that about five thousand people in the United States die each year from asthma. There are approximately forty deaths each year from allergic reactions to insect stings. Reactions from some drugs, and from certain foods such as nuts and seafoods, have occasionally proved fatal. Asthmatic patients are at additional risk when undergoing surgery that involves anesthesia.

Can I ever be cured of my allergy?

In many patients, the tendency to allergy is inherited. Because this