

Survey on the Effect of Environment on Hypersensitive Individuals and Awareness Amongst People

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Abstract

While the literature does not provide definitive conclusions on how our surroundings might impact allergen and subsequent allergic illnesses. Dust and dusty climate in Karachi can increase the chances of allergy in dust allergic persons. Frequent and continuous construction of different buildings, roads etc lead to excessive pileup of sand, dust, animal dander, smoke in our surrounding which can be very fatal to persons allergic to the above especially asthmatic patients. Pollutants and pollution in our surroundings can again be a cause of allergy among individuals. According to a survey conducted on the overview of students, physicians, and pharmacies and medical stores we came to a conclusion that on a general overview 60% of the public suffers from dust allergy which is quite a vast percentage. Though these allergies are not life threatening but they do find it difficult when surrounded by a dusty environment. Hence keeping in mind such a percentage certain measures must be taken both by the population, government, health practitioners and the allergic individuals themselves which may include preventive, cautious, awareness, emergency and other such programs to help control the spread of dust and allergens and relief patients of their allergic sufferings.

Keywords: Allergy, environment, awareness

Introduction

An allergy is a reaction by your immune system to something that does not bother most other people. Substances that cause allergy reactions are:

- Mold spores
- Pet dander
- Food

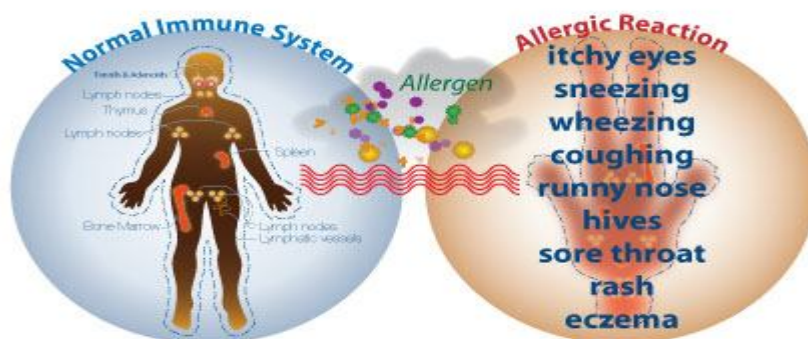
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- Insect stings
- Medicines
- Pollen
- Dust mites [1]

Mechanism of Allergy

The mechanism of allergic reactions is broken down into two successive phases: a sensitisation phase during which the immune system identifies the substance as an allergen. When the organism comes into contact with the allergen again, the allergic phase is triggered.[2]



Symptoms and Treatment

Allergies can cause a variety of symptoms such as a sneezing, runny nose, rashes, itching, swelling or asthma. Allergies can range from minor to severe and the anaphylaxis is a severe reaction that can be life-threatening. Normally doctors use skin and blood tests for diagnosis of different allergies. Treatments include medicines and avoiding the substances that can cause the reactions.[1]

Allergens at Home

When outdoors, we are exposed to pollens and dust. But when indoors, we are also exposed to "allergens." Allergens are proteins that originate from cockroaches, mold, pets, and dust mites (tiny bug-like creatures that live in dust). Most people know that allergies can make you runny and itchy eyes, sniffle, sneeze, and other cold-like symptoms. But allergens can also trigger asthma attacks. Asthma symptoms include wheezing (a high-pitched whistling sound heard when exhaling); coughing spells unrelated to a cold; shortness of breath and tightness in the chest. Allergic *asthma* affects about 3 million children (8 to 12 percent of all children) and 7 million adults in the United States each year! [3]

Potential Allergens in our Environment and Their Effects

Signs and Symptoms	Environmental Tobacco Smoke	Other Combustion Products	Biological Pollutants	Volatile Organics	Heavy Metals	Sick Building Syndrome
Respiratory						
Rhinitis, nasal congestion	Yes	Yes	Yes	Yes	NO	Yes
Epistaxis	No	No	No	Yes ¹	No	No
Pharyngitis, cough	Yes	Yes	Yes	Yes	No	Yes
Wheezing, worsening asthma	Yes	Yes	No	Yes	No	Yes
Dyspnea	Yes ²	No	Yes	No	No	Yes
Severe lung disease	No	No	No	No	No	Yes ³
Other						
Conjunctival irritation	Yes	Yes	Yes	Yes	No	Yes
Headache or dizziness	Yes	Yes	Yes	Yes	Yes	Yes
Lethargy, fatigue, malaise	No	Yes ⁴	Yes ⁵	Yes	Yes	Yes
Nausea, vomiting, anorexia	No	Yes ⁴	Yes	Yes	Yes	No
Cognitive impairment, personality change	No	Yes ⁴	No	Yes	Yes	Yes
Rashes	No	No	Yes	Yes	Yes	No
Fever, chills	No	No	Yes ⁶	No	Yes	No
Tachycardia	No	Yes ⁴	No	No	Yes	No
Retinal hemorrhage	No	Yes ⁴	No	No	No	No
Myalgia	No	No	No	Yes ⁵	No	Yes
Hearing loss	No	No	No	Yes	No	No

Fig1: Representation of Commonly Experienced Hypersensitivity Reaction

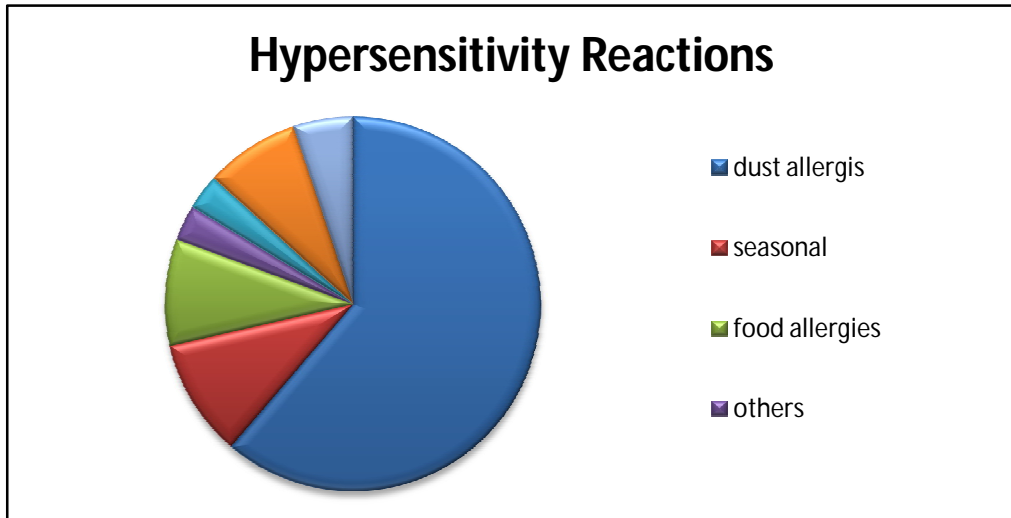
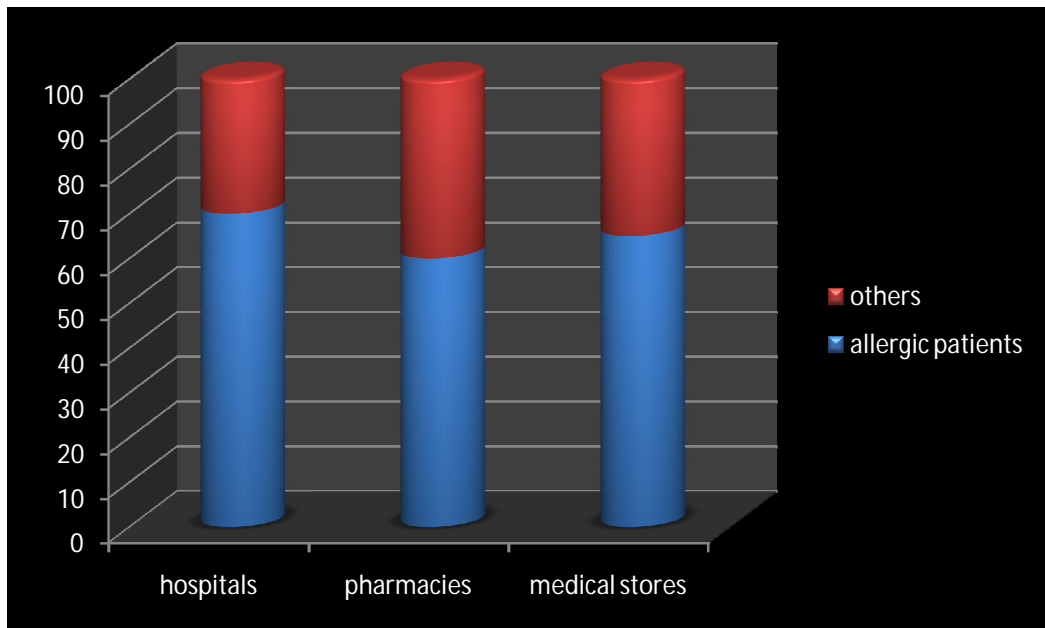


Fig 2: According to Another Survey Conducted which was of Pharmacies our Localities the Results of Which are Displayed Below



The % of patients being treated or dispensed with anti allergy medications was way higher than all other diseases combined. One of the major allergy being dust related which is aggravated due to the constant dust in the environment of Karachi. This leads to an extreme unrest amongst allergic individuals.

Measures that can be practiced by the general public, health practitioners, physicians and other responsible people of our society include:

- Always carry an anti allergy medication with you in case of an allergic emergency.
- Spreading awareness amongst lay public to wear masks, getting themselves tested for potential allergies so as to avoid any fatalities.
- Pharmacies should also counsel and guide allergic patients as to when and how to take their medications and how often to take them.
- Also the government must avoid the processes of construction in windy seasons and must make sure that the constructions are completed in a shorter span of time so as to avoid the excessive spread of dust.
- Patients with food allergies must practice self abstinence from food that they are allergic to as this would only benefit them.
- To avoid drug allergies pharmacist and physicians must make sure to take down patients medication and allergy history as drug allergies are quite fatal usually.
- People with skin allergies must wear gloves when handling the allergen, e.g. water (while washing dishes) and must applying soothing lotions as frequently as possible.
- Those allergic to the sun must wear an ample amount of sun block before stepping out in the sun.

Conclusion

Towards the end of this survey after weeks of research on the internet and amongst our surrounding we came to realize that not much work is being done to prevent allergies and their fatalities from happening. People consider hypersensitivity reactions to be of the least concern and are not taking any measures as such to stop them from happening.

Though allergies are an inevitable consequence of whether genetic inheritance or environmental impact on the human body but solid measures must be taken if not to eradicate it but to at least prevent one self from any serious hazards resulting from a hypersensitive fatality.

Measures must be taken to clean our selves and our surroundings so as to prevent dust and pollutant related allergies.

Such foods must be avoided which have the potential of causing allergy or have caused allergy in your family before. Before using any new product a self patch test must be performed in order to prevent any serious skin allergies. Along with the above our health practitioners and the pioneers of medicine must play a major role in controlling any fatalities by arranging seminars, printing brochures, spreading awareness, setting up awareness camps, carrying out surveys.

Another important factor that came to our knowledge after carrying out this survey was that almost 60% of people having allergies are allergic to dust and dust particles, which is quite a large percentage of the total population. This maybe due to the fact that is an increased amount of dust in our surroundings whether it be from the wind, old furniture, frequent construction of roads and buildings or other such factors which are aggravating dust allergies amongst the population. This factor if not taken into serious consideration may result in the development of asthma. Hence if the government or building companies are not taking into consideration the health of their people we ourselves must practice self care and increase the use of masks when in a dusty surrounding. Concluding our results and survey we pray that we all work together to build a stable, healthy and safe environment for ourselves.

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