

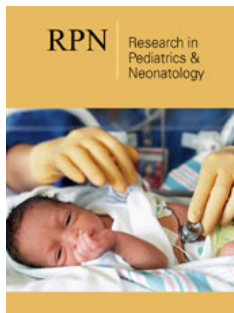
# A 30 Years Treatise of Allergies and Asthma in Saudi Arabia (1989-2019)

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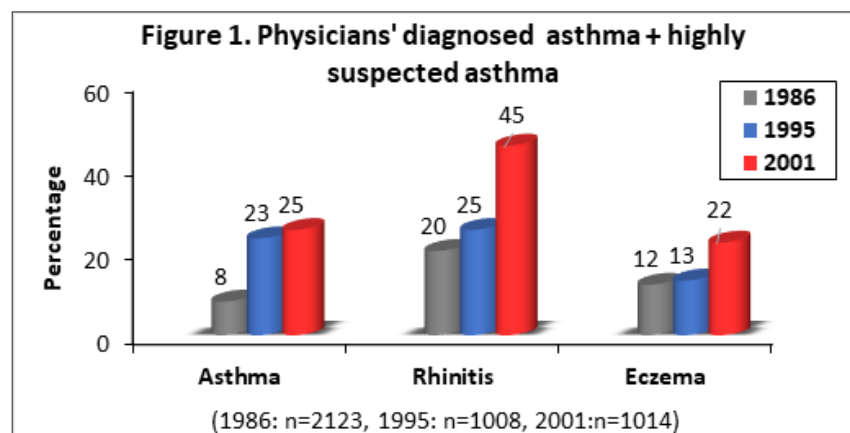
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## Introduction

The scientific and clinical investigations, on both prevalence of allergies and asthma and their possible causative factors in Saudi Arabia, have continued since 1989. Primarily, being a desert country, western scientists and physicians did not believe the existence of a high prevalence of asthma and allergic rhinitis in Saudi Arabia, considering it as a non-specific bronchial hyper reactivity rather than an IgE mediated allergic response to local/regional allergens. In the late 80's, we started our investigation on prevalence of asthma with an internationally designed questionnaire led by Professor JD Wilson, that time Professor of Clinical Immunology at King Saud University, Riyadh, Saudi Arabia. At the same time, we started indoor and outdoor aeroallergens monitoring program to evaluate the presence and role of various allergens presents in the environment. Our earlier findings were published [1-15], followed by many other investigators in the country. We continued our investigation and compared the prevalence data from 9 cities which showed an increasing pattern of asthma and allergic rhinitis nationally (Figure 1).



**Figure 1.**

A comparison with the available data from different countries (different methods used), Saudi Arabia stood in the middle of the world, close to western Europe (Figure 2). A number of investigations, followed since the early publication in 1989, have confirmed that there is an increase in IgE mediated respiratory allergic diseases in almost all regions of Saudi Arabia.

The causative factors investigated have a great deal of regional variations. For example, airborne pollen grains, in some cases, are different (*Salsola imbricata*) from the species known to cause allergies in the United States or the European continent (*Salsola kali*). Likewise, a few potent allergens, e.g. Ragweed (*Ambrosia artemisiifolia*) is not found in Saudi Arabia. The authors have therefore decided to summarize their own work along with other investigators within Saudi Arabia or with regional and international collaboration, as a treatise of asthma and allergies in Saudi Arabia covering a period of research and investigation from 1989 to 2019. The treatise will include all aspects related to allergic diseases. The areas we intend to cover may include 1) Bronchial asthma, 2) Allergic Rhinitis (Hay Fever), 3) Atopic Eczema,

4) Conjunctivitis, 5) Heredity of Asthma, 6) Wheezy Bronchitis, 7) Smoking and Asthma, 8) School and Asthma, 9) Sleep and Asthma, 10) Rain induced asthma 11) Indoor Allergens and Asthma, 12) High Altitude and Asthma, 13) Diet and Asthma, 14) Pet and Asthma, 15) Allergic bronchopulmonary mycosis and Asthma, 16) Allergic bronchopulmonary aspergillosis and Asthma, 17) *Prosopis juliflora* antigen and asthma, 18) Urban/Rural Areas in Saudi Arabia and

Asthma, 19) Obesity and Asthma, etc. Our recent studies published [16-24] present interesting data on indoor allergens both in coastal and non-coastal cities along with patients and control homes. Most of these data are available online however, a review to include all these will benefit not only the clinicians and scientists but allergy and asthma patients as well.

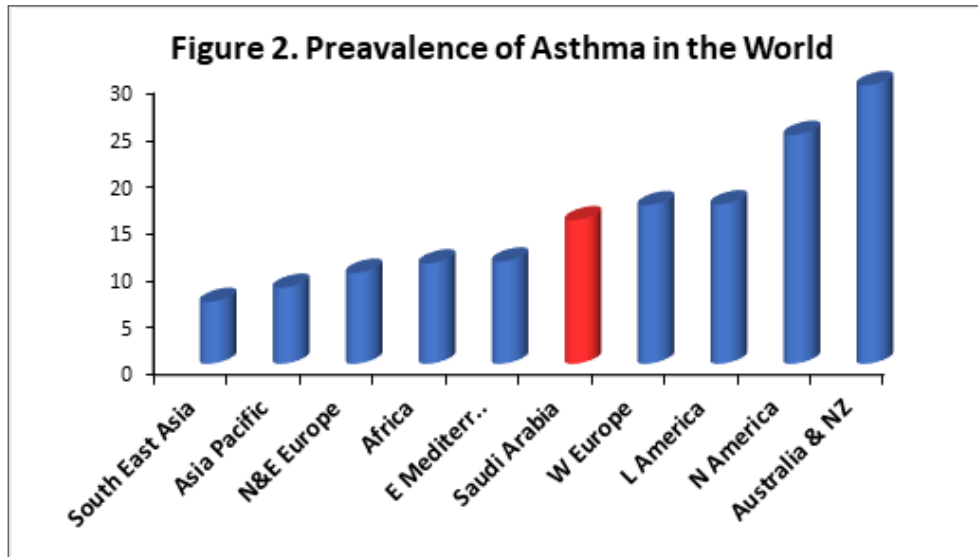


Figure 2.

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