Allergic reactions may involve any part of the body. The most frequently involved areas are:
1. Respiratory tract, with upper or lower airway symptoms
2. Skin, with eczema, hives and swelling
3. Eyes and ears

**ALLERGY RESEARCH IN LEBANON**

In the country of Lebanon, scientific research in Allergy Immunology made modest but important strides in the last several years. The Lebanese National Aerobiology Project completed a three year air sampling study across the country that identified for the first time ever, the most common aerosolized pollen allergens in Lebanon. Several articles or abstracts have already been published in international allergy/immunology journals (1, 2, 3) and further analysis of a large body of data continues. At least two national epidemiological studies on the prevalence of Allergic Rhinitis, Eczema and Asthma were performed and published. One of those studies which used the ISAAC (International Study on Allergy and Asthma in Childhood) standardized tools and which was conducted among an adolescent and school age population, identified a significant prevalence of allergic respiratory disease in the country, closely comparable to regional and world-wide figures (4).

More recently the AIRGNE study, a comprehensive survey of Lebanese adult asthmatics that investigated the patients’ real-life experience and perception of their disease, produced surprising findings and important insights (5). Moreover the CARMA Physician Survey which addressed the clinical awareness among non-specialists of the link between Allergic Rhinitis and Asthma revealed a large gap between the physicians’ knowledge and actual practice habits, further reinforcing the need for continued education and focus on this important clinical issue (6).

**COMMON ALLERGIC CONDITIONS:**

**ALLERGIC RHINITIS/RHINO SINUSITIS/ RHINOCONJUNCTIVITIS:**

Allergic Rhinitis or “inflammation of the nasal membranes” and is the most common respiratory illness after the common cold, affecting nearly one third of the population. Allergic Rhinitis leads to nasal and eye symptoms such as itching, sneezing, rhinorhea, congestion, tearing, along with possible asthma exacerbations. Spring allergies are triggered mainly by pollen and in some areas mold as well. Pollen grains are male reproductive structures of seed-bearing plants (trees, weeds and grasses), which carry the males gametes to the female part of the plant. The average pollen particle is invisible and thinner than a human hair, ranging in size from 10-45 um. Contrary to popular belief, most bright flowers do not cause allergies!!! Those flowers are pollinated by flying insects (entomophilous), and their pollen particles tend to be too large and waxy to be blown around by the wind. Most pollens of allergic importance are wind-borne (anemophilous).

During the spring and early summer seasons, the most common allergy-causing pollens in Lebanon come from trees such as Cypress, Olive, Poplar, Pine and Eucalyptus. Grasses such as Bermuda, Timothy and Perennial Rye also pollinate during this time of year. Parietaria (Pellitory) is a very prevalent weed plant in Lebanon and the Mediterranean region in general, and produces large amounts of very potent allergy-causing pollen in the spring. Other Weed Pollen such as Pigweed and Russian Thistle pollinate late in the Summer and early Fall. Molds –microscopic fungi can also trigger allergies. Some types of molds are present all year round while others peak in the summer or early fall. Common outdoor molds are Alternaria, Aspergillus and Cladosporium.

Most cases of Allergic Rhinitis however are Perennial or year-round and are caused by indoor allergens, the most common of which in Lebanon and worldwide is Dust Mite (Acarini). “House dust” contains a variety of elements
including animal dander, indoor molds, fibers and insect parts. “House Dust Mite” is a special type of mite (thou-
sand of mite species exist) that lives in house dust but is
actually not an insect. A person’s bed is said to be the dust
mite’s palace. Since dust mites need three things to survive:
body’s heat, moisture and shed skin cells, it is not surpris-
ning then that mattresses, pillows, bed sheets and blankets
contain hundreds of thousands of these tiny mites along
with millions of their allergy-causing particles. Reducing
exposure to dust mites is vital to long term control of al-
lergies. It is now possible to use special protective barriers
that can cover mattresses and pillows and sealing the dust
mites inside. These protective barriers are made of special
fabric with specific fabrication requirements that insure an
effective protective feature and yet provide a comfortable
touch and feel.

ALLERGIC ASTHMA

A common misconception about Asthma is that it is easily
recognized and treated. While very effective medications
exist for Asthma, this condition is often found along with
several others such as Allergic Rhinitis, Sinusitis, Adeno-
oid Hypertrophy, Gastroesophageal Reflux, Post nasal drain-
age, all which can complicate the treatment of Asthma or
make the diagnosis and treatment more challenging. This
may actually lead to overtreatment and overdosage or the
opposite, underdiagnosis and undertreatment. Class-
ic symptoms of Asthma include difficulty in breathing,
with coughing caused by obstruction of the small bron-
chial tubes, either by swelling of the membrane lining, the
tubes, or by contraction of the musculature around the
tubes, and by plugging of the tubes with mucus. As a re-

result, breathing becomes difficult, the chest swells, there are wheez-
ing noises, the neck muscles strain, and the asthmatic patient cannot lie
down in comfort.

Most cases of Asthma especially in older children and young adults
are caused by underlying allergies, and almost 80% of Asthma is accompa-
nied by Allergic Rhinitis. However the triggers for asthma exacerbations
may be due to other factors, such as viral infections (most commonly,
pollution, weather changes, exercise or others. Even though the triggers vary, the
underlying allergic sensitivity (especially to year-round allergens
such as house dust mite and pet allergens and some pollen) is what
keeps the inflammation in the lungs on-going and along with it the
readiness to have an asthma attack.

Contrary to popular belief, there are several forms of Asthma and
“baby asthma” is much different from Asthma that persists or develops after 3 years of age. It is important
to realize that not all cases of Asthma will spontaneously
disappear in adolescence and even if it does, allergies do not
remit which makes the person susceptible to having asth-
ma symptoms return in adulthood, especially if the person
smokes or is exposed to pollutants or further allergen expo-
sure. Therefore it is imperative that once Allergic Asthma is
recognized early in childhood, that definite steps are taken
towards not only pharmacological therapy but also towards
environmental control measures and strong consideration
should be given towards a specialized immunological treat-
ment named “Allergen Immunotherapy” which is the only
treatment that can result in permanent reduction or even
total elimination of the underlying allergies.

SKIN ALLERGY: ATOPIC DERMATITIS (ECZEMA), URTICARIA/ANGIOEDEMA

Atopic Dermatitis or Eczema can affect up to 20% of Chil-
dren. While dry skin is a common factor in this condition and even though most conditions of eczema improves be-
fore school age, allergies can still play a significant role.

Both food and environmental allergies can exacerbate At-
opic Dermatitis. It is important to realize that even though
Atopic Dermatitis is a chronic illness, it is often a sign that the child
is Atopic (Predisposed to Allergic Disease) and as such
the child should be considered at risk for developing aller-
gies in the future. While parents are rightfully concerned
with the skin of their babies and children, it should be
pointed out to them that their child needs to be monitored
for development of any respiratory allergies in the future.

Urticaria or Hives is a common condition in childhood and
fortunately is often mild and transient. Most often infec-
tions are the responsible cause, however allergies may pre-
sent as hives as well. Fortunately, most cases of hives do
not result in a life-threatening condition although parents
and doctors are always concerned that if left untreated this
could happen. It is important that the treating physician
realizes as quickly as possible if the hives are part of something
bigger or a mild transient event.

Chronic hives or Chronic Urticaria on the other hand is a
very frustrating conditions and many causes can be re-
 sponsible for this condition. A detailed workup is needed
for this condition and unfortunately sometimes a cause
cannot be found. Ruling out underlying systemic disease is
the most important part in the evaluation of this condition.
Treatment exists and is often successful, although patients
are often frustrated that their treatment seems endless.

DRUG ALLERGIES

Drugs allergy occurs when a sensitive individual is injected with,
or ingests a drug that causes lymph cells in the lymph
glands to produce antibodies. Once antibodies have been
developed, further contacts with the drug cause more anti-
bodies to be formed and subsequent release of histamine.

Histamine causes reactions such as fever, hives-like skin
eruptions, joint pains, weakness, and swelling in various
parts of the body.

Sulfa drugs, penicillin and aspirin are three of the most
common causes of drug allergies. Physicians must be es-
pecially careful not to administer a drug to which a patient is
allergic.

Drug allergies may result in liver damage, bronchial asth-
ma, inflammation of the heart muscle, and even death.

In treating drug reactions, discontinuation do a suspected
drug will usually result in improvement within 48 hours.

If the symptoms are extremely severe, other drugs may be
used to control the allergic symptoms, such as ephephi-
nelle, ephedrine, antihistamines or cortisone.

FOOD ALLERGIES

The same immunologic principles that cause Drug Allergy can also lead to Food Allergy. Symptoms of Food allergy
include rash, swelling, nausea, vomiting, cramps, diarrhea,
hives, nasal congestion and headache.

Food allergies are very common, especially in early child-
hood (3-4%), but no age however is exempt. The most
common food that causes allergy in children is Cow’s milk
followed by Egg. Most cases of these food allergies re-
solve by age 3, however children with food allergy may
ever develop respiratory allergy as they get older even if
their food allergy has resolved. The most dangerous type
of food allergy which rarely if ever spontaneously remit is
food allergy caused by peanut, tree nuts, fish and shellfish.

Food preparation in households where children with these
types of food allergy should be monitored closely as even
mild contamination of other foods can lead to a severe
allergic reaction. Unfortunately definitive treatment for
food allergy other than avoidance does not yet exist. Strict
avoidance measures should be taken and preparation for
immediate emergency treatment of any reactions should be
established in both households and schools.

In adults, food allergy is often blamed for many condi-
tions and unfortunately there are many commercial testing
tools and clinics that probably unknowingly propagate
this myth. People who mistakenly believe to suffer from
certain food allergies may suffer from depression, anxiety
and even malnutrition because they are told to avoid these
foods. Proper diagnosis and confirmation or refutal of their
food allergies is a high priority for these patients.

ANAPHYLAXIS

Anaphylaxis or Anaphylactic shock is a severe, acute, sys-

temic hypersensitivity reaction, most commonly but not always mediated by allergic sensitivities, leading to the release of potent mediators from tissue cells known as mast cells and peripheral blood basophils. This condition which is life threatening and can lead to death, is often caused by severe allergies to certain foods (most cases of fatal food reactions are caused by tree nuts) and drugs. Patients who have suffered from a life threatening anaphylactic reaction should undergo an extensive evaluation by an Allergy/Immunology specialist who is an expert in discerning the different causes of this condition. All patients regardless of the cause of their condition should carry with them an emergency medication called “Adrenaline or Epinephrine” which should be promptly administered in the thigh muscle at the start of a reaction. Ready to use Epinephrine injections are available worldwide but unfortunately are not available in Lebanon. Alternative forms of Adrenaline however do exist and should be obtained through the treating physician.

TESTING AND TREATMENT

While major advances have been made globally in the diagnosis and treatment of allergic diseases, and important research about these conditions has been and continues to be initiated in Lebanon, there is still a major need for proper evaluation and management. Several factors for this deficiency exist, including the lack of enough Board Certified Allergy/Immunology specialists to serve the whole population, the lack of proper referral to those specialists, the abundance of commercialized but poor quality diagnostic allergy tests, and biased ineffective medical education of physicians. The accumulation of these factors among others leads to false beliefs about allergies and their complications, both among the general public and the medical community as well. A major reevaluation and overhaul on a public health level is needed in order to effectively reverse this trend and establish concrete steps towards improving health care of Allergic Disease.

WHO’S BEEN SLEEPING IN YOUR PILLOW?

Who is this? It’s your pillow. Your sleeping partner. Your friend. Your pillow. Your pillow is the one who sleeps with you every night, and it’s the one that you can’t live without. But do you know what your pillow is really doing to you? Your pillow is probably full of dust mites, which are tiny creatures that live in the fibers of your pillow. These mites can cause allergic reactions in people who are sensitive to them. So, what can you do to prevent this? You can wash your pillow every week, and you can use a pillow encasement to keep the dust mites out. You can also use a dehumidifier in your bedroom to keep the humidity down, which helps to reduce the growth of dust mites.

References
6. CARMA Survey, (Combined Asthma Rhinitis Management Alliance), February 2010, Unpublished Data

Prevention

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Advanced facility for the diagnosis and management of eye, ear, nose & throat disorders. The Eye & Ear Hospital similarly joins the most qualified physicians and surgeons with the most up-to-date medical technology. Our medical staff currently numbers 25 ophthalmologists, 12 otolaryngologists and 2 plastic surgeons.

Our facility features:
- 18 outpatient clinics
- 50 inpatient beds
- 5 operating rooms
- Radiology & laboratory facilities
- A cosmetic center
- A specialized dental clinic
- Conference center
- Medical library

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