What patients really want to know about **Asthma**

Dr. Vikram Jaggi

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PREFACE

I have written this book with a single-minded motivation – to help asthmatics understand their condition and to manage their asthma themselves, so that they can live an absolutely normal life. And when I say absolutely normal, I mean "Absolutely Normal." And that is possible!

I have devoted a significant portion of my professional life, in fact, over 20 years, almost exclusively to understanding and treating asthmatics. I've seen their struggle, their doubts and their worries. I've seen them changing doctors, trying homeopathy or ayurveda and trying desperately to find someone who can help them. When they fail to find answers and relief, many give up in frustration and accept this as their fate and live their lives coughing and wheezing and sneezing.

I've also seen many who accept that they have a chronic condition (much like diabetes) and then systematically go about trying to understand and control it. This approach helps them lead happy, active and normal lives.

We nowadays have very good, safe and easily accessible treatments for asthma that are affordable. So lack of good treatment is not the problem. It's my considered opinion that those asthmatics that are not doing well are

doing so because of the misconceptions and myths or lack of proper guidance. This book is meant to address these very areas. I've tried to keep the language simple and the style conversational – without compromising on scientific accuracy.

Many of the topics that are included in this book are, in fact, suggested by my patients. These are the questions and doubts asthmatics face and are unable to get clear and precise answers.

For example:

- Does yoga help?
- Do children outgrow their asthma?
- Is it okay for asthmatics to take part in sports?

I've tried to answer such questions in an easy-to-understand language. The reader may read the book sequentially from the first to the last chapter or pick up any chapter which interests him or her.

I hope this book reaches the hands of many asthma patients and they find it useful and it gives them a better quality of life.

Dr. Vikram Jaggi
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What patients really want to know about **Asthma**

1 What is asthma?

Before trying to clarify the meaning of the word asthma, let us get some clarity on the term allergy. An allergy is an oversensitivity in a person to certain things in the environment. For instance, a person allergic to eggs reacts abnormally after eating an egg. This reaction may occur in different parts of the body. It could be a skin rash, sneezing, diarrhea or wheezing. Thus, an allergy can manifest in different sensitive organs, giving rise to different symptoms.

In asthma, it is the air tubes of the lungs (the bronchi) that are oversensitive. The oversensitivity could be to any or many of the following: pollen, fungal spores, house dust, animal dander, smells, smoke, etc. They are like a touch-me-not plant, which reacts briskly when touched. They are irritable and get easily irritated by the above-mentioned stimuli. And when they get irritated, they react.

The reaction does three things in varying proportions:

- Constriction of the air tubes: This causes wheeze, tightness and breathlessness.
- Phlegm production: This causes balgam.
- Irritative chemicals: This causes dry irritative cough.

In any given patient, one or the other symptoms may be more or less.

So this, in simple language, is what asthma is.

Asthma could come in attacks or may be indolent and ongoing. It may come only during the change of season or may be present throughout the year. It could be stable or brittle. It could be easy or difficult to control. Dry cough may be its only manifestation. This is called cough variant asthma.

Children with asthma have a lot of dry cough without phlegm or even shortness of breath. The cough is more at night or in the early morning. It may come on exertion or on laughing. Coughing bouts followed by vomiting are highly suggestive of asthma.

Elderly people with asthma have cough, phlegm and tiredness as the common manifestations of asthma. They generally don't complain about breathlessness because they generally are not exerting enough to feel breathlessness.

Many patients who have sneezing, runny nose and blocked nose (i.e. who have Allergic Rhinitis) have minor and indolent symptoms of asthma. But they don't realize it. This is partly because their nasal symptoms are far more prominent and also partly because they don't want to accept the fact that the allergy is going down in to the lungs and causing asthma-like symptoms.

Asthma is not an uncommon condition. Asthma is not a scary word. Asthma can be easily controlled. So if you have asthma like symptoms, don't be an ostrich and put your head in the sand. Accept it! Acceptance is the first and most important step towards relieving your symptoms and getting your asthma fully under control.

What is the meaning of FULL CONTROL? What is well-controlled asthma? That is the topic of the next chapter.

2 What is well-controlled asthma?

“Control” is a nice word! It has very positive vibes. “I am in control of my life.” “My finances are under my control.”

The word 'control' has been used, by both patients and doctors, in chronic diseases like diabetes or high blood pressure. It conveys a meaning that is easy to understand. “My blood pressure is under control. Or, because of eating too many Diwali sweets, my blood sugar is out of control.” Asthma is another very common chronic disease. We are now using this word in asthma too, to convey whether asthma symptoms are controlled or not.

So what is good control of asthma? To my mind, asthma is well controlled when the patient is able to live his or her life in a normal way and is able to do whatever he or she wants to do without asthma hindering it in any way. That, to me, would be well-controlled asthma. And this is very easily achieved in a vast majority of cases.

Let us analyze this in a little more detail. Asthma is well controlled when the patient has no symptoms of cough, wheeze or breathlessness in the day or night. There is no need to take SOS medication or to visit the doctor as an emergency. Of course, there is no need for hospitalization! The lung functions, when they are tested, are normal and the bronchial tubes do not undergo any permanent changes or damage. And very importantly, there are no side effects of medications. This is what well-controlled asthma would look like.

Is this definition of good control of asthma, a utopian dream? Is it possible to achieve this? YES, indeed it is! If both the patient and the doctor work sensibly together, it is possible to achieve this kind of control in about 95 percent of the asthmatics. This requires a combination of avoidance of allergens (after finding out the allergy-causing substances), taking medications which are mostly inhaled, life-style and dietary modifications and in selected cases, immunotherapy.

What about the remaining 5 percent? These patients are what are called difficult-to-control asthma patients. Their asthma is intrinsically severe and it is difficult to control it to the satisfaction of the patient and the doctor. Here a compromise may have to be reached wherein asthma is reasonably, but not optimally controlled, at a medication level that does not give side effects. Some symptoms will persist and will have to be accepted and tolerated.

Thus, we see that in a majority of the asthma patients, whether they are children, adults or elderly patients, it would be possible to control asthma. What would the patient have to do for this?

Here is my list, as a doctor who treats a lot of asthma patients, of expectations from patients of asthma:

- Know your allergens and triggers of asthma and try to avoid as many of those as can be done reasonably.
- Be regular with inhaled medication. If your asthma is present throughout the year, then take controller inhalers throughout the year. If your asthma is only seasonal, as is the case in 20-30 percent of asthmatics, then take it only during the change of season. Don't be in a hurry to stop the inhalers!
- Diet regulation, regular exercise, yoga and keeping an optimum weight helps. Try to work towards this.
- Be upbeat!

3 Why are asthma and allergy increasing so much?

When, at a social gathering, I tell someone that I am an asthma and allergy specialist, the usual response is, “Doctor, why is asthma increasing so much? It must be the pollution.” This tells us two things. Firstly, the increase is so clear and obvious that lay people have also observed it. And secondly, the popular perception is that it must be related to the increasing pollution. But is pollution the only or the main reason? Asthma is a genetic disease. Genetic diseases do not suddenly become more common. Obviously the influence of our environment is far more important in asthma than we had thought.

Some sobering facts:

- Asthma is increasing at a rate of 50 percent every decade.
- In India, asthma in children was 2 percent forty years ago; now it is 12 percent.
- In a class of 50 children in India, 6 are likely to have asthma.
- In the more westernized countries such as Australia and the UK, the incidence of asthma in children is even more – 1 in 5 have asthma. Incidental, Australia has very little pollution.

Asthma and allergies are more common in the following:

1. The English-speaking Western countries than in the developing/underdeveloped countries.
2. Urban areas than in the rural areas.
3. Affluent people.
4. Societies having hygienic living conditions.

5. Children of small families.
6. More polluted cities.
7. In countries where carpeting is the norm.

What do these facts tell us? Let us try to solve this puzzle.The immune system of a newborn is like a clean slate. When it is stimulated and kept active by dirt, germs and worms, it develops in a certain way. It is pre-occupied in fighting germs and worms. But if it is not given any work, it starts reacting to innocuous things such as pollen and dust by making IgE (a type of immunoglobulin) antibodies against them. This leads to an allergic tendency and asthma.

So the hypothesis is that the epidemic rise in allergy is due to our immune system getting mis-directed.

Modern living gives our immune system too little of the right kind of stimulation due to our too-hygienic living, and early use of antibiotics and vaccinations.

We also give too much of the wrong kind of stimulation by way of pollution, and house dust exposure, and the wrong type of diet.

In my opinion, here are the main reasons for this epidemic of asthma and allergy:

- Our obsession with hygiene.
- Pollution.

- Our faulty eating habits.
- Increased exposure to allergens such as house dust mites and fungal spores.

Over-hygienic living, vaccinations, and early antibiotic use for every childhood infection has resulted in the immune system of the younger generations not being called upon to work. Just as an idle mind is a devil's workshop, an idle immune system is an allergy producer!

Much as we would like to blame pollution for the increasing incidence of asthma, it is not the real culprit. Pollution does not cause asthma. Yes, it does make existing asthma worse.

Our westernized diet of fizzy drinks, fried food, ready-to-eat foods, colours and preservatives and a diet lacking in fruits, nuts and vegetables is also responsible for the increasing trend of allergies. Obesity is also linked to asthma.

Carpeted offices and houses, plush furniture, and fluffy toys are a constant source of house dust mites.

Will we be able to reverse this trend? What can be done?

More on that in Chapter 6.

4 What is the difference between Asthma and Allergy?

Allergy is a mechanism; asthma is a disease.

Allergy is an oversensitivity of the immune system to react to certain harmless things in our natural environment. These things (called allergens – what evokes or provokes an allergy) could be pollen of weeds or trees, house dust, fungal spores, food items, drugs or cosmetics.

The important thing to remember is that these items do not cause any adverse reaction to most normal or non-allergenic people. However, in people with an allergic tendency with sensitization to that particular allergen, they will cause a reaction.

The reaction may occur in different parts of the body:

- Skin: Urticaria, allergic dermatitis, contact dermatitis
- Nose: Allergic Rhinitis
- Intestines: Vomiting and diarrhea after eating the offending food
- Lungs: Asthma

Allergic reaction occurring in the lungs (or, more specifically, in the air tubes) and causing inflammation and narrowing of the airways is called asthma.

Therefore, Allergic Bronchitis = Asthma.

So, allergy is a broader term and includes many diseases, including asthma.

Many times, patients ask the doctor: “Doctor, I hope this is not Asthma; I think it is an Allergy”

Inherently, the patient does not like the word Asthma. The word asthma evokes certain notions in his mind which are not pleasant. He/she would much rather like the term 'allergy'. Some doctors also do not label the condition as “Asthma.” They keep using nicer-sounding words like “Allergy”, “Bronchitis”, “Eosinophilia” or “Lung congestion” while the condition is actually Asthma. They are probably afraid that if they call it Asthma, the patient might run away to another doctor!

Also, not all of asthma is caused by allergy. In children, 80 percent of asthma is caused by allergic factors. Only 50 percent or so of asthma in adults is caused by allergy. Moreover, in a given patient, both allergic reasons (pollen season or too much exposure to dust) and non-allergic reasons (viral infections or emotions) could cause aggravation of asthma symptoms.

5 Do emotions play a role in asthma?

Yes, they do. But only a small role and that too only in some asthmatics.

Hundreds of years ago, asthma was thought to be a neurotic or a psychosomatic disease. Now, of course we know that asthma is a disease in which the airways are oversensitive and over-reactive. They become constricted or narrowed in response to a variety of stimuli. These stimuli could be pollen, dust, temperature change, viral infections or strong smells or strong emotions.

Thus, emotions can trigger asthma. This is truer for some asthmatics than others.

Anger, frustration, depression, family discord or social maladjustment are some of the common emotions which make asthma worse. I have consistently observed that asthma patients have worsening of their asthma symptoms when they are under tremendous stress. Many patients of asthma wheeze and cough after laughing loudly!

Many patients of what is called difficult-to-control asthma have underlying depression or serious psychological issues. These have to be un-covered and addressed. Simply increasing the asthma medications does not work.

It is also my consistent observation that asthma patients who are generally optimistic and upbeat respond better to treatment and their asthma is much better controlled than those asthmatics who allow their asthma to get the better of them.

The mind is very powerful. Most diseases are influenced by our emotional state. This is particularly true for asthma.

So what is the bottomline? The bottomline is that emotions do not cause asthma, but they certainly influence asthma. Positive emotions influence it positively and negative emotions influence it negatively.

6 Is it possible to prevent asthma and allergies?

In a previous chapter, we explored some of the reasons why asthma and allergies are increasing. This brings us to the next logical question: Is it possible to prevent the development of asthma? Yes, it is possible!!

Can genetically determined traits be modified by proper environmental influences? For example, can two short parents have a child who grows up to be tall enough to become a basketball player? To some extent, it is possible!! If there is a family history of diabetes, is it possible that with proper diet control, weight regulation and exercise, a person may not develop diabetes? Yes, it is possible!

Let's come back to asthma.

Parents who have a family history of asthma or allergy are worried that their children may also have asthma. They have reason to worry. Asthma and allergies are genetic – they run in families. If one parent has asthma, the chances of the child having asthma as well are about 25 percent. This risk increases to 50 to 60 percent if both parents happen to have asthma.

It is very usual for such parents to ask the doctor what they could do to minimize the risk of their child getting asthma.

Here is a list of actions to be taken to minimize the risk of development of asthma. These are all practical and do-able things.

Breast-feeding by the mother for the first 4 – 6 months. Breast milk is not only good for the baby's nutrition and immunity but also helps in steering the immune system away from allergies.

- No cigarette smoking by the parents in pregnancy and thereafter.
- Late introduction of allergy-producing food items in the diet of the child. This would include soya, milk, peanuts, egg, rajmah daal and chana dal.
- What the mother eats, or does not eat, during pregnancy has been found to have no major effect on the subsequent development of asthma in the child. So no need for needless do's and don'ts for the expectant mother!
- Watch the diet of the child so that he or she do not become overweight or obese. Obesity is linked with asthma.
- We have seen that our rapid dietary changes as a society have predisposed us to have more allergy-related diseases, including asthma. A diet consisting of aerated drinks, fried food, junk food, processed food and food preservatives promotes allergy. These must be avoided or minimized. A diet consisting of fresh fruits and vegetables, nuts, vitamin C and antioxidants is considered good for preventing the development and expression of allergy.
- Avoid taking antibiotics for common childhood infections. There infections are necessary for the proper maturation of the immune system and provide a lifelong direction for

the immune system to react only to the germs and not to harmless things like pollen and dust etc.

- Cleanliness in childhood is, of course, necessary but the mother should not be obsessed with overly hygienic living. This too does not allow the immune system to be active and develop and mature normally. Minimizing childhood exposure to house dust has been tried but with mixed success rates.

- Allergen Immunotherapy (allergy vaccine or allergy shots) is the only scientifically proven therapy that has been shown to prevent the development of asthma in patients with allergic rhinitis. It can also reverse asthma. It is effective even years after stopping the injections. But immunotherapy is not predictably or equally effective in all patients.

- A stressful lifestyle impacts all types of diseases. Asthma and allergy are no exception. Our modern medicine does not fully appreciate this fact although allopaths are now waking up to the reality of the mind-body connection.

7 Do children 'outgrow' their asthma?

Parents of children with asthma are concerned about their child.

Two questions that they almost invariably ask the specialist are:

- Doctor, is this really asthma?
- Will my child outgrow it?

There is a popular misconception (based on false hope) that asthma will simply go away as the child grows up and that this happens around puberty. This hope is strengthened by a non-specialist doctor's reassurance that the child will become all right at puberty. The parents of a child with asthma have a more optimistic rather than realistic view of this.

This hope and belief prevents children with asthma from getting timely treatment.

Does asthma really go away as the child grows older? What is the truth? The truth is that some children do outgrow asthma but most don't.

Is it possible to predict which child will outgrow asthma? Not exactly. But there are some indications:

1. Boys are more likely to outgrow asthma than girls.
2. The milder the asthma, the more likely that the child would outgrow it.
3. A family history of milder asthma and others outgrowing

asthma make it more likely that the child could also outgrow it.

4. Kids are more likely to outgrow asthma if their blood tests show fewer and fewer allergy markers (such as IgE levels) as they get older.

5. Kids are more likely to outgrow asthma if they have less sensitive lungs.

6. Kids are more likely to outgrow asthma if they have good lung function on testing.

7. Kids are more likely to outgrow asthma if they have less need for daily asthma medicines to lessen the frequency and severity of asthma attacks.

If kids need daily asthma medicines, it's important for them to take them regularly and on a long term basis. But long-term use of asthma drugs has no effect on outgrowing asthma. Even using inhaled steroids has no effect on the outgrowing of asthma by kids.

All in all about 40 to 50 percent of the children who have asthma will outgrow it. In some of them, symptoms will return in adulthood (generally at the age of 30 – 40 years).

Adult-onset asthma very rarely, if ever, goes into remission. There is a scientific therapy that can cure asthma, at least in some patients and that is Allergen Specific Immunotherapy (allergy shots). See chapter 40 for more details.

Many small children wheeze. Some wheeze only in response to viral infections. These young wheezers may have small airways and as these children grow up wheezing disappears. These children do not have asthma. But, yes, their asthma-like symptoms disappear as they grow older.

So what is the message for the parents? One can hope (and pray) for a spontaneous resolution but certainly cannot count on

it or depend on it to happen invariably. Avoidance of allergens helps. For more details on the prevention aspect, please sees the chapter “Is asthma preventable?” (Chapter 6) Meanwhile, the treatment must go on.

On a more optimistic note:

- Another piece of good news: Contrary to popular belief, asthma usually does not become more severe with time. Actually, with the patient’s coping ability becoming better with the passage of time, asthma is better controlled.

8 Cigarette smoke and asthma

Everyone knows that smoking is bad for the lungs. This is no rocket science. Asthmatics already have over-sensitive airways and, thus, the irritants and toxins in cigarette smoke are doubly harmful to them. Yet, the percentage of asthmatics who smoke is nearly the same as the percentage of smokers in the general population in a given society or country. The allure or pull of nicotine is so strong that asthmatics, knowing fully well that smoking is harmful to them, continue to smoke.

Asthmatics who smoke are doing a great disservice to their lungs. It could be compared to putting salt over burnt skin. If your skin gets burnt, it may not be your fault. But if you insist on putting salt over it and this makes your burns worse, it certainly is your fault.

Research has shown that asthmatics who smoke:

1. Have more symptoms.
2. Have poorer lung functions.
3. Have a faster deterioration of lung functions with age.
4. Are less responsive to medication.
5. Require more steroid dose for control than asthmatics who don't smoke.
6. Asthmatics who smoke generally end up with irreversible damage to the lungs.

What has been written above also applies to children with asthma who get second-hand smoke from their smoker parents. If the parents really care for their child's asthma, then they should quit smoking or at least never smoke in the vicinity of the child.

Children born to mothers who smoke when pregnant have poorer lung functions and are more prone to develop asthma and other allergic diseases later in life. The expectant mother should not inhale any cigarette smoke.

Does smoking cause asthma? No, it does not. But it surely makes it worse and difficult to manage.

So the bottom-line is that if you or any family member has asthma, you should quit smoking. No ifs or butts about it!

9 Gender differences in asthma

Most diseases do not discriminate on the basis of gender - that is, they occur with nearly equal frequency in both males and females. However, some diseases show partiality towards one sex! For instance, rheumatoid arthritis and thyroid disorders are far more common in women and heart diseases are somewhat more common in men.

Clear sex differences exist in asthma. Boys have more asthma before puberty. There is a reversal in this sex ratio during puberty with girls having more asthma throughout the reproductive years.

A corollary to this observation is that in childhood asthma, the chances of the child outgrowing the asthma are brighter for boys than for girls - 50 percent vs. 40 percent in boys and girls, respectively.

Hormonal changes have been implicated in the reversal of the sex ratio. Testosterone is an immunosuppressant and is likely to be protective, while female sex steroids are pro-inflammatory and will increase the susceptibility to asthma.

An interesting observation that supports the theory that the female hormones are asthma-promoting is the fact that asthma in a pregnant lady is more likely to worsen when the baby in the womb is a female and more likely to slightly improve when the child in the womb is a male child!

Some other general observations on gender & asthma:

1. Adult onset asthma is more severe in women than in men.
2. For the same degree of reduction in lung functions, women have more severe symptoms than men.
3. Women seek medical advise more often than men.
4. Psychological issues negatively impacting asthma are more frequently seen in females than in males.

10 What is the Allergic March?

In the life of a child, there are some Kodak moments. You may also call them “Ahaa moments" - when the child gives the first smile to the mother, when the child takes the first tentative step, when the child starts to walk or when she for the first time, says “Mama.” These are landmarks in the life of a child!

In the life of an allergic child, apart from these normal “Ahaa” moments, there are some “Oh no” moments too. For example, when it is discovered that the child is allergic to milk and has colic on drinking milk. Or later, when there is development of eczema, sneezing attacks or constant runny nose or wheezing and breathing difficulty.

It is a common observation that children who have an allergic tendency show signs of allergy sequentially. This is called the allergic march. Food allergies usually appear the earliest. So a child might have colic or eczema due to milk. This usually starts at infancy to 2 years of age. Next to come is allergic rhinitis, which is characterized by runny or blocked nose and terrible sneezing. This usually happens at the age 3 – 6 years. Around the same time or slightly later, asthma may also appear.

They may appear sequentially, such that the earlier form of allergy disappears when the new one appears. Or they can run concurrently - for example, sneezing and runny nose was already there and asthma also starts causing trouble.

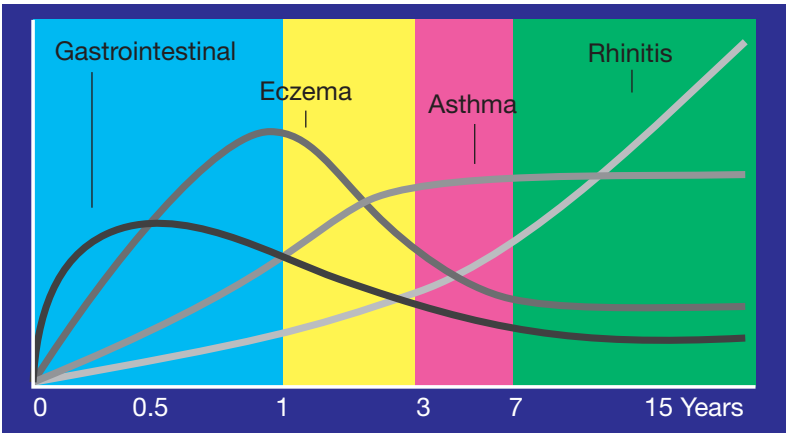
BUT THERE IS GOOD NEWS! Just as these things appear sequentially, they may also disappear at a certain age. A lot of children fortunately outgrow their allergies at around puberty. This can happen in 50 percent of the boys and 40 percent of the girls.

Imagine you are watching the march at a 26th January parade. You first see the army contingent, then the tanks roll in followed by the air-show. The allergic march is also like that.

Why do allergies appear in a preordained sequential pattern?

We know that for allergy to develop there has to be a predisposition to allergy and there has to be an exposure to the allergen. For instance, one cannot develop an allergy to penicillin without being exposed to it.

ALLERGY MARCH



The immune system of a new born first encounters food allergens through the gut. Common allergens at this stage are milk, egg and wheat. The manifestations of allergy are in the form of intestinal colic and skin allergy.

Air borne allergens - pollen and house dust – are encountered later. They have to interact with the immune system for at least two years for sensitization to occur. Hence, allergic rhinitis and asthma develop a little later.

Scientist and doctors are now studying this allergic march deeply with the hope to intervene in this cycle so that this allergic march can be halted or averted.

11 What are the common misconceptions about asthma?

Chronic diseases like diabetes, asthma, high blood pressure, have no cure. They can be managed and controlled.

A person who has such a disease usually explores all avenues looking for an elusive cure. He seeks information from all quarters like friend, relatives or other patients and through the internet. The information that he thus gets, no doubt well meaning, is often confusing and sometimes even dangerously misleading.

The common mis-conceptions or myths about asthma are as below:

1. Asthma is a psycho-somatic disease.
2. Asthma is an infectious disease and can be passed on to others through contact.
3. Inhalers are habit-forming.
4. Inhaled steroids have dangerous side effects.
5. Asthmatics should not take part in sports.
6. Children always “outgrow” asthma at puberty.

Reality

1. Asthma is not in the head. The problem lies in the air tubes of the lungs, which are over-sensitive. However, it is true, that emotional upsets can be a trigger for asthma in some asthmatics.
2. Asthma cannot be passed on to another by personal interaction or sharing food etc. Yes, it does run in the family but the transmission is through genes.

3. Inhalers are simply a method of delivering the medicine at the right place very effectively. They are a remedy. Asthma is usually a life-long condition. It's not a habit; it's a requirement. Just like spectacles are a requirement, not a habit.

4. In the usual doses that they are used, inhaled steroids are very safe. A very small dose goes directly in to the air tubes with very little being absorbed into the blood stream. If inhaled steroids are not used and the asthma is uncontrolled, then the consequence are far more serious.

5. A person whose asthma is well controlled can take part in all sport activities. In fact, many Olympic medalists have been asthmatics and asthma has not prevented them from performing well at the international level. Sourav Ganguly has asthma; that does not prevent him from playing at the international level.

6. Some children do; some don't. It is not an invariable rule that children outgrow asthma. Boys are more likely to do so than girls. If a child has asthma, it must be treated. One cannot not give treatment in the hope that it will eventually vanish.

12 What are the usual symptoms of asthma?

The basic problem in asthma is that the air tubes of the patient are over-sensitive. There is a very nice word in hindi for this: “chid chida.” So the airways of an asthmatic are like a touch-me-not plant or chhui mui.

They react to environmental factors like temperature variations, dust, pollen, pollution and viral infections in an exaggerated manner and this causes them to do three things:

- Get constricted or obstructed
- Produce more phlegm
- Produce chemical that cause cough

Now, it will be easy to understand the usual symptoms of asthma.

Here are the usual symptoms of asthma:

- Chest tightness
- Breathing difficulty
- Cough
- Phlegm production
- Wheeze

Let’s consider them one by one, and in a little more detail.

Asthma patients usually complain of chest tightness or a load over the chest or difficulty in breathing deeply. Some say they are unable to get a satisfactory breath.

Most asthmatics complain of going out of breath when they do physical exertion like running or climbing stairs etc.

Cough is also a common symptom of asthma. It is usually a dry cough but may produce some phlegm too. Too much phlegm production is NOT a feature of asthma. The cough is typically more in the early morning hours or late at night. Cough happening after laughing or crying is very suggestive of asthma. It is also more pronounced on exposure to smoke, dust, smells etc.

The phlegm of an asthmatic usually has two important characteristics: it is sticky and greenish-coloured.

"Wheeze" is what is usually considered the hallmark of asthma. It is a whistling sound produced from the lungs due to air passing through the narrowed airways. It can be heard by the doctor with a stethoscope. Many a times, the patient or the patient's relatives can hear it from a distance.

All these symptoms of asthma are more when:

- There is a change of season (due to more pollen or fungal spores)
- After a viral infection of the chest. Normal people recover fast but an asthmatic will continue to cough for weeks or even months after an upper respiratory viral infection.
- There is exposure to smoke or dust or painting in the house.

The above pattern of symptoms strongly points towards asthma.

13 What are the unusual symptoms of asthma?

It is said that “diseases do not read textbooks!”

Most asthma patients have the typical symptoms of asthma as we have discussed in the previous chapter. Therefore, it is easy for the doctor to diagnose it as asthma and easy for the patient to accept that it is asthma.

But some have unusual symptoms and this creates difficulties. Such patients suffer a lot because they are not diagnosed easily and in time. Sometimes, they are labelled as “Psychosomatic” or “Neurotic.” Some unfortunate ones end up getting treated for tuberculosis.

Some patients of asthma only have a dry hacking cough as the sole manifestation of asthma. They have no difficulty in breathing nor do they have wheeze. Even their lung function tests are normal. This is called cough-variant asthma. But it is treated as usual asthma and it also responds well to this treatment and not to other symptomatic treatments like cough syrups and antihistaminics etc.

Sighing, rapid or shallow breathing can also be asthma. Here, one needs to be careful because these symptoms can also be due to psychological stress or anxiety without there being any asthma.

Very prolonged coughs after a viral infection of the chest can sometimes be an indication of asthma. If after every episode of an upper respiratory infection, an individual is having a troublesome cough which refuses to go away for a month or more, then asthma should be considered.

Feeling uncomfortable at night when lying down and not being able to sleep can happen in asthma. They are unable to sleep due to a discomfort which they cannot clearly describe or they may wake up frequently. In actuality, they have “Nocturnal Asthma.”

Some asthma patients complain of only tiredness as the sole manifestation of asthma. This is more common in elderly patients. Since they do not do vigorous physical activities, they cannot fully realize the breathing difficulty but are simply tired all the time.

Unusual symptoms of asthma are seen more commonly in the extremes of age groups i.e. in children and in the elderly.

14 Pregnancy and asthma

Expectant mothers who have asthma are often anxious.

Their anxiety is usually related to the following concerns:

❶ Will the asthma adversely affect my pregnancy or my baby?

❷ Will pregnancy adversely affect my asthma?

❸ Can asthma medicines be taken safely in pregnancy?

❹ Will my child also have asthma?

They need not be unduly concerned. Well-managed and well-controlled asthma does not create problems during pregnancy and delivery; neither for the mother and nor for the baby. Let us discuss the above mentioned concerns in some detail.

Effect of asthma on pregnancy and the fetus:

Uncontrolled asthma means that the mother is not getting enough oxygen. This naturally has adverse consequences for the mother, for the continuation of pregnancy and on the fetus in the mother. Well-controlled asthma leads to a normal pregnancy, normal delivery and a normal child.

Effect of pregnancy on asthma

What happens to asthma when a woman becomes pregnant? The data on this is interesting. In 1/3rd of the cases the asthma becomes worse, in 1/3rd it actually becomes better and in 1/3rd it remains the same. The experience of the last pregnancy is likely to be repeated in the next or subsequent pregnancy.

It is usually observed that:

- If worsening is to occur, it usually occurs between the 28th to 36th week of pregnancy;

- In the last 4 weeks of pregnancy, some improvement of asthma is usual; and,
- Problems during labour or soon after are very rare (provided the asthma was well controlled during pregnancy).

Safety of asthma medicines in pregnancy

Pregnant women dislike taking medicines in pregnancy. This is, generally speaking, a good policy. But one must also remember that uncontrolled asthma with a consequent lack of oxygen to the mother and the foetus has far more serious effects.

Fortunately, most asthma medicines have been found to be safe for use in pregnancy. It is very important to keep asthma under good control during pregnancy and if medicines are required to achieve that goal, then they must be taken.

Will the child also have asthma?

Asthma is a genetic disease which runs in families. So if the mother has asthma, chances are more that the child might also have asthma (later in life). This chance is 20-30 percent. But if the father also has asthma (or some other allergy), the chances increase to around 50-60 percent.

The bottomline:

1. Well-controlled asthma has no bad effects on pregnancy, mother or the baby.
2. Asthma medicines are safe in pregnancy. Consult the doctor for details.

Just as one is so careful about diet, rest and vitamins during pregnancy (so that the fetus gets enough nutrition) should we not be careful that the mother is getting full oxygen?

15 Asthma and obesity: What is the link?

Both asthma and obesity are diseases of westernization! Both are increasing at an epidemic proportion. Both are clearly related to the western lifestyle.

That much is clear. But could the two be causally related? Which means, could obesity be (one of the) causes of asthma?

Now, that is an interesting proposition!

The asthma-obesity link has been observed for many decades. Doctors know that fat children and fat elderly women have a higher incidence of asthma. But it was always presumed that asthmatics tend to become fat because they are unable to exercise due to breathlessness caused by asthma. Another hypothesis was that since they remain indoors for longer, they are more exposed to house dust mites.

Data is now emerging that the link is more intimate as well as more complicated. Obesity is now being implicated as a cause of asthma. Exactly how that happens is not confirmed but it is thought that the general inflammatory chemicals of obesity, along with abnormality of insulin metabolism, somehow makes the air tubes more twitchy. Being overweight certainly makes breathing more difficult and laboured and this is no rocket science!

Some confirmed facts:

- Asthma in children is twice more likely to be found in obese children than in normal weight children.

- Obese asthmatics are five times more likely to be hospitalized than normal weight asthmatics.
- Obese asthmatics are harder to control than normal-weight asthmatics.
- Obese asthmatics have more confounding conditions like acid reflux and sleep apnea, which make their care more complicated.
- Data also shows that weight reduction helps in the better control of asthma.

So the bottomline clearly is:

- If you have asthma, it is prudent to keep your weight down.
- If you have a family history of asthma, teach your children to eat healthy and keep their weight down, so as to reduce the chances of them developing asthma.

16 Viral woes of asthmatics

Viral respiratory infections are the commonest cause of viral fever. They cause the typical symptoms like fever, body and head-ache, throat pain, runny nose and cough. In a usual case, the fever gets okay in 3 – 5 days, weakness in a week, and cough in 2 weeks. Antibiotics are usually not required. The old adage is that a flu will get okay in a week if you take medicines and in 7 days if you don't.

But things get more troublesome and complicated for an asthmatic. When an asthmatic gets a viral respiratory infection, the fever usually is not higher nor remains longer. Nor are viral infections more common in an asthmatic. But there is much more cough and wheeze and shortness of breath. An asthmatic has hypersensitive air tubes. Just as they over-react to allergens (pollen, dust and moulds), they also are oversensitive to viruses. The cough and wheeze produced by the virus in an asthmatic can last up to 4 – 8 weeks. This tires the person out and really tests his or her, and the doctor's patience.

If the asthmatic is regularly taking the controller inhalers, the wheeze and cough will be less. Montelukast started as soon as the viral fever starts reduces the intensity of symptoms, at least in children. Increasing the dose of inhalers is the usual policy. Cough suppressants are required for the first week or so. Oral steroids are sometimes required. I may add here that, unlike allergen-induced wheeze, viral-induced wheeze is not very responsive to medication. Oral steroids are also not that effective.

Moreover, remember that antibiotics are not required for viral fevers. They cannot kill the virus. But they do kill the good bacteria in the body. Overuse of antibiotics also causes drug

resistance. Overuse of antibiotics in children is one of the reasons for increasing asthma in children. High fever or severity of symptoms alone is no reason to start antibiotics.

The doctor must be consulted in the following situations:

- Very young children or elderly patients.
- Existing diseases such as diabetes or severe heart or lung disease.
- Shortness of breath or chest pain.
- Mental confusion.
- Very high fever.
- Fever not settling in 5 days.

Drinking plenty of warm fluids like warm water, tea and coffee is helpful. Clear chicken soup is particularly useful. Ginger water and honey helps.

So it is clear that viral respiratory infections are quite troublesome for asthma patients. Also, their treatment is not highly effective. Therefore, an asthmatic should try everything possible to prevent getting such infections.

What to do to minimize the chances of getting a viral respiratory infection:

- During the viral season, frequently wash your hands.
- Use separate hand towels.
- If someone at home or office has a viral fever, then take special care to protect yourself.
- Avoid going to crowded places.
- Flu vaccine helps, but only somewhat.

17 My son wheezes badly when he plays football. I should stop him from playing, right?

Recently, the mother of a 12 year old asthmatic boy, visited my clinic. She was very intelligent and was obviously very well read. Our conversation was long, but I am reproducing some parts of it from my memory.

Mother: Doctor, my son wheezes when he goes out to play football. Running clearly aggravates his problem. I should stop him from playing, right?

Me: NO! Wrong. Don't stop him from playing. Control his asthma so that he may play like any normal child. It is very much possible. Exercise is good for health. We should not let asthma come in the way of exercise.

Mother: But Doctor, I have read somewhere that exercise is a trigger for asthma and the general rule for asthmatics is to avoid their triggers.

Me: In general, that is correct. Triggers should be avoided, with only one exception. And that exception is exercise. Many asthmatics, when their asthma is not well controlled, have trouble when they exercise. The reason could be exposure from outdoor pollen, particularly pollen from grass, dust exposure, pollution or the fact that breathing in cold air irritates the inflamed air tubes and they react by constricting. But the solution does not lie in trying to avoid exercise. It lies in controlling the inflammation of their air tubes completely, so that exercise and the associated triggers are now not capable of provoking them.

Mother: Then what should I be doing so that my son can can play normally?

Me: Firstly, keep his asthma under good control by taking the preventer inhalers regularly. If the inflammation in the air tubes is kept under control by these inhalers, then triggers cannot set off an asthma attack. Secondly, know the triggers of your son's exercise-induced attacks – they could be any of the earlier-mentioned allergens – and take special care. For instance, if he is allergic to grass pollen then indoor sports or swimming could be good for him. On the other hand, if he is allergic to chlorine of the swimming pool, then he has to avoid swimming. Thirdly, remember that asthmatics tolerate sports with spurts of activity better than those which require sustained exertion (like long distance running). Fourthly, remember to ask him to slowly warm up before sports and cool down after the activity. And lastly, some long-acting bronchodilator inhalers (like salmeterol) can be taken about an hour before sports and this can prevent broncho spasm.

Mother: I have always stopped my son from going out to play. He always feels bad that he cannot play like the other kids. But I always thought that it was best for him.

Me: Obviously, you had his best interests in mind. Many times, mothers of asthmatic children impose unnecessary restrictions on their child, hoping that it would reduce the asthma. I see a similar thing happening in case of diet. Don't eat this, don't eat that, etc!

Mother: Doctor, do you really think that my son can play football like other kids. He really loves football!

Me: Most certainly! But first, be regular with the inhalers. Also, since he has not played much before, he is quite out of shape. Start slowly. Let him get back into shape. Let him slowly build stamina. Then, he will be able to play like any other kid. Don't

be afraid. Let him go. Cut the umbilical cord. Did you know that many sport champions and Olympic athletes have asthma and it does not prevent them from winning gold medals.

So the broad message is clear - asthma triggers are everywhere. While it is desirable to avoid them, it would only be possible to a certain extent. It is equally important to take preventer inhalers to control the over-sensitivity of the air tubes, so that these triggers cannot initiate mischief.

18 What are the special features of asthma in children?

Let me narrate to you my recent experience with a young asthmatic. This young boy, all of seven years, was brought to me for the first time. I was asking the parents about his symptoms. When our conversation had gone on for 2 minutes, this boy raised his right hand, much in the way you do it in school when you want to say something. And he said, *"koi meri baat bhi sunega kyaa?"* (will someone listen to me?). So I asked him to tell me his problem. He said, *"Mere andar se awazein aati hai."* I asked *"Kaisi awazein?"* He said, *"Aisa lagta hai ki FM radio kharaab ho gaya hai!"*

A very vivid, apt and original description of wheeze! That's how original a child's mind is.

So how is asthma in children different from the usual asthma?

Let's see it from two perspectives: the patient's and the doctor's.

The Patient's perspective

Denial: The label of "Asthma" is hard for the parents to accept. Part of the reason is that the parent's notion of asthma is that of a acute or severe breathlessness. Asthmatic children have a lot of cough. Cough that is more in the morning or late at night, cough that is brought on by running or laughing or on exposure to strong smells is highly suggestive of asthma. Colds that become chesty or a cough that appears after a viral respiratory infection and don't go away quickly are features of asthma.

Thus, we see that the symptoms of asthma are different in children. The main symptom of asthma in children is cough while in adults, it is breathlessness.

Children cannot assess or explain their symptoms clearly. Therefore even if the child is finding breathing difficult, he usually does not complain much.

The mother of the asthmatic is usually very worried about the side effects of medications.

About 50 of asthmatic kids outgrow their asthma. Adults outgrow asthma very rarely.

The Doctor's perspective

Doing a lung function test (spirometry) or allergy testing by the skin prick method in a small child is not easy. Therefore, the diagnosis of asthma in children is based on history taking and examination only.

The fact that the child improves with asthma medication is taken as a sign that this is asthma. This is a practical method of diagnosis though, scientifically, not the best way.

Teaching and ensuring that small children take the inhalers properly, so that the medicine goes all the way into the deepest air tubes, is not very easy for the doctor. He must work harder and with more patience with children.

19 What are the special features of asthma in the elderly?

Asthma can occur in older people (age greater than 65 years) under two circumstances:

❶ It was present since the younger days, and has persisted.

❷ It first appears in old age.

In either situation, it can present certain peculiar problems:

- Symptoms of asthma in the elderly are somewhat different.
- Breathlessness is assumed to be part of normal ageing and, thus, no medical help is sought.
- Other age-related diseases may be present, which make the diagnosis difficult.
- The patient may be taking other drugs which are interfering with the asthma, or its treatment
- Asthma in the elderly tends to be more severe and could become life-threatening.
- The usual asthma medications can have more serious side effects in the elderly.
- Mental impairment makes taking the drugs difficult and challenging.
- Physical impairment, for instance, hand arthritis, makes using inhalers difficult.

Let us again analyse these issues from two perspectives: The patient's and The doctor's.

The Patient's perspective

When asthma starts in older age, the symptoms like breathlessness, cough and wheeze are usually thought by the patient to be normal symptoms of ageing. No diagnosis is sought, no diagnosis is made and no treatment is started. As a result, the disease advances and lung damage occurs. Once the diagnosis is made and some treatment is to be started, there is a natural disinclination on the part of the patient to start new medicines since he or she is already on so many other medicines (like blood pressure or diabetes). In such a situation, the patient may prefer to suffer some symptoms rather than take medicines which may cause side effects and are also costly.

The Doctor's perspective

When faced with an elderly person who has cough and wheeze that may be due to asthma, the doctor also faces tough choices. "Is this really asthma? Could it be a manifestation of heart disease? Could it be something more serious like cancer? How much should I investigate it, knowing that investigations are expensive?" These are some of the issues the doctor has to carefully consider and weigh. Yet one cannot err by missing something.

The patient and the doctor can be on the "same page" if they openly discuss the issues and then collectively decide the future course of action.

I often see a remarkable improvement in symptoms in elderly patients on starting treatment - many a time, much more than I or the patient had expected, to the delight of both!

20 Which other diseases can mimic asthma?

Asthma usually presents with cough, wheeze, breathlessness and chest tightness, which is more in the early morning hours and late at night. The diagnosis is usually straightforward. The above-mentioned symptoms are common complaints in many kinds of diseases and, thus, other diseases can often mimic asthma.

It is good to keep in mind the adage: “All that wheezes is not asthma.”

The mimics of asthma are different in different age groups:

In children

- Congenital lung and heart diseases
- Foreign body, which was accidentally swallowed, in the air tubes
- Premature children with small air tubes
- Cystic fibrosis
- Infection-related wheeze

Young adults

- Anxiety with sighing-breathing
- Smoker’s cough
- Drug-induced cough, especially with blood pressure medications

Older adults

- Heart diseases with breathlessness
- COPD
- Cancer
- Interstitial fibrosis

Whenever the response to the usual asthma treatment is below expectations, other diseases which can mimic asthma should be suspected.

In such situations, more detailed testing is required to confirm the correct diagnosis. Lung function testing, X-rays, CT scans or bronchoscopy may be required.

21 Asthma deaths

The topic of this chapter is not a pleasant one. It's not pleasant for me to write and it's not pleasant for you to read. But unpleasant topics too need to be addressed. They cannot be brushed under the carpet.

Deaths due to a sudden catastrophic disease are very tragic and painful. Asthma deaths are all the more tragic because most, if not all of them, are preventable.

Asthma deaths have been extensively analysed to understand as to how they could have been prevented.

The reasons behind asthma deaths are usually a combination of the following factors. I say "a combination of factors" because, usually, a series of errors occurs before a fatal outcome.

Denial: The patient or, in the case of a child, the parents are in denial mode. This results in either treatment not being taken or being taken very irregularly, allowing the asthma to deteriorate to a dangerous level.

A disinclination to take steroid inhalers: Steroid inhalers are both effective and safe in asthma. But most patients are afraid of them, fearing possible side effects. Thus, asthma remains uncontrolled and triggers like pollen or infections can lead to a catastrophe.

Misjudgement of severity: Both the patient and the doctors make this mistake. The reason is that past experience of an attack and subsequent improvement dulls them into a false sense of security.

Psychological issues: About 80 percent of asthma fatalities have a severe personal or familial psychological issues -

depression, family discord, legal problems, alcoholism and extreme poverty. These problems appear to be, and in fact are, so grave that the asthma treatment is put on the back burner.

A severe variety of asthma: Severe asthma present since age of 3 years and a rare type of asthma called 'brittle asthma' (see next chapter) is more at risk for fatality.

Wrong type of treatment: Over-reliance on relievers and under use of controller inhalers. Use of aspirin or beta-blockers.

Others situations associated with asthma deaths are as below:

- Exposure to cigarette smoke
- History of hospitalizations for asthma
- History of severe drug reactions
- Associated severe heart or lungs disease
- Sudden exposure to pollen, dust, emotions.

Asthma deaths usually follow two patterns

- Slow deterioration over 2 – 3 days, with under-estimation of severity by all concerned and then suddenly getting very bad. This is more common.
- Very sudden (within hours) deterioration without much warning. This is rarer.

WHAT CAN BE DONE?

- Asthmatics should be cared for by an expert. This is more necessary in case of severe or brittle asthma.
- Asthma patients should be advised to take on the responsibility of regularly taking their preventer inhalers.
- Identifying the asthmatic who is at risk, and be extra careful.
- Create better awareness that asthma can be fatal, if not properly controlled.

22 Brittle asthma

Most asthma is easy to manage if both the treating doctor and the patient are sensible and doing their own jobs well.

However, some asthma cases are difficult to treat. This is called 'difficult asthma'. Approximately 5–10 patients out of 100 patients with asthma will have difficult asthma.

Difficult asthma is difficult to treat due to a variety of reasons. The asthma is, in itself, very severe, because of lung damage due to smoking, lung damage due to badly treated asthma for a very long time, fungus growing in the lungs which does not allow the asthma to get better, or patients with oral steroid-dependent asthma, are some of the common reasons. Some of the patients with difficult asthma have a peculiar problem that is called brittle asthma. Roughly 1 out of 200 asthma patients will have brittle asthma.

Brittle simply means that “which can break easily.” Brittle asthma is also the kind of asthma which deteriorates suddenly or easily.

It is of two types:

- Type 1
- Type 2

Type 1, brittle asthma is which is very chaotic. There is hour-to-hour and day-to-day major variations in how the patient feels and also in the PEFR readings.

Type 2, on the other hand, is a type of asthma which is apparently well under control and the, suddenly and for no apparent reason,

deteriorates rapidly and severely. This can be to the extent that it is life-threatening.

Brittle asthmatics generally have more sensitizations to allergens, more food allergies and many have adjustment or psychological problems.

These types of asthmatics are very hard to manage. They must be under the care of a very experienced doctor to make sure that their asthma is well controlled and that simultaneously, they do not suffer the side effects of over-medication.

23 Peanut allergy...and the lessons learned

Peanut allergy? What's that? A 100 years ago, this would have been a normal response. Because peanut allergy was very uncommon then.

About 50 years ago, allergy to peanuts started increasing. This happened first in the USA, UK, Canada and Australia. Later, it was seen frequently in other Western countries.

Surprisingly, it was, and still is, quite uncommon in India and China. And even in Israel.

When peanut allergy increased in the USA, the American Academy of Paediatrics advised that peanuts should not be eaten by pregnant women and that peanuts should not be introduced too early in the diet of the child. It was hoped that this would bring down the rising prevalence of peanut allergy.

But later studies showed that this advise had the exact opposite effect. Peanut allergy increased even more! Immaculately done scientific studies from Israel showed that avoiding peanuts in pregnancy actually increases the chances of peanut allergy in the child.

Around the turn of the century, the same Academy issued a statement that their earlier advise was wrong and that there is no scientific evidence to suggest that avoidance of peanuts could help in this matter.

Coming back to the observation that peanut allergy is so uncommon in India. We Indians also consume a lot of peanuts. So do the Chinese. But they don't get too much peanut allergy.

Possibly, this has something to do with the “processing” of the peanuts. Americans eat a lot of peanut butter or dry roasted peanuts. Asians use peanuts which are boiled, pickled or fried.

This also begs the question that if processing peanuts increases the chances of getting allergic to it, then is consumption of processed food in general the reason why food allergy is becoming so much more common?

What lesson can be learnt?

- Inception of allergy is a very complex area.
- We still don’t know all the answers.
- Once an allergy has developed, avoidance is most certainly required. But by the same token, we cannot presume that avoidance will lessen the chances of development of allergy.
- By admitting your mistake, you don’t become smaller; in fact, you become bigger!

24 Could antibiotic overuse be related to food allergy?

Food allergies are actually a fairly recent thing – more and more recognized perhaps in the last 20 or 30 years. There were very few people throughout history who suffered from peanut allergies or gluten intolerance. Only recently have food allergies become a thing of concern. Could there be something that we – modern mankind – are doing wrong?

Why are we allergic to food?

Did you know that food allergies have increased by over 50 percent in just 10 years? But what could be causing this? According to a number of experts, a lot of the blame rests on the shoulders of antibiotics.

Many naturalists have been ranting and raving against antibiotics for years. Perhaps there is a little bit of truth in what they say. No doubt they are life saving in certain situations. It's also true that they are misused and over used. And this is certainly a matter of concern. Studies have discovered that there may be a concrete link between food allergies and high antibiotic use.

In 2004, a study conducted in the University of Chicago took a look at the connection between food allergies and the bacteria living in your guts. A number of rats with peanut allergies were tested, and their reactions to the peanuts noted.

The scientists leading the study then gave the rats a type of gut bacteria called *Clostridia*, which is found in the human body. When the rats were given this bacteria, their peanut allergies disappeared. This human bacteria in the rat's gut did away with their food allergies!

Their research led them to REMOVE certain gut bacteria from the mice's digestive tract, and almost immediately, the mice developed food allergies once more. Antibiotics were used to remove the bacteria, and only once they re-introduced the *Clostridia* bacteria in the mice did their food allergies disappear.

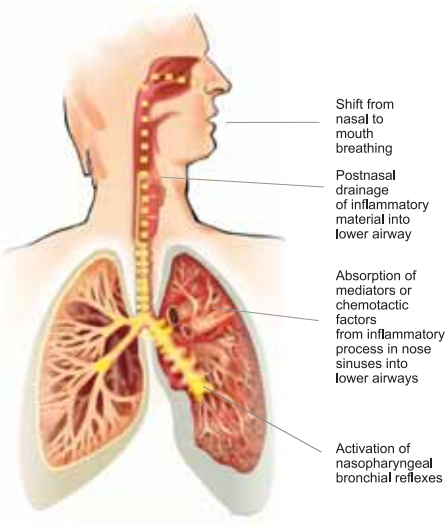
Now, the truth is that it's very difficult for the doctors to identify just which strain of *Clostridia* bacteria can be the one to defend against food allergies - or if there even is just ONE. There are so many types of bacteria floating around the human body that it's difficult to isolate the most important ones – so a lot of research is left to be done in order to determine which of the *Clostridia* bacterial strains will be the one to play a central role in gut health.

However, it's important to note that antibiotics are linked to food allergies. They may not be DIRECTLY responsible, but the fact that antibiotics can get rid of the *Clostridia* bacteria means that antibiotics are killing the good bacteria, that can prevent food allergies.

You may be surprised to know that the average human gut contains 2 kilograms of bacteria – 2 kg.! The number of bacteria normally residing in our gut is more than the number of cells in our body. No wonder that, these exert a modulating influence on our immune system and the development of allergies.

Remember that many children are given treatments for viral and bacterial infections at a young age, as the increasingly concerned parents of today are resorting to medicinal treatments rather than at-home remedies. This means that children are exposed to antibiotics from a young age, which can in turn, lead to the suppression and elimination of the good bacteria in the gut. If this continues to happen, more and more children will develop food allergies.

25 What happens to the lungs in asthma?



Have you seen a touch-me-not plant? If you touch the leaves of this plant, the leaves immediately curl up and fold.

The air tubes of an asthmatic are also oversensitive in a similar way.

They are oversensitive to a variety of stimuli: dust or pollen in the air, strong smells, weather changes, viral infections, etc.

When these allergens or triggers reach the air tubes, they react. This causes a series of chain reactions which bring many cells and chemicals to the air tubes

Collectively, this leads to 3 important changes in the air tubes:

- Swelling in the inner-most lining of the air tubes.
- Contraction of the muscles around the air tubes.
- More phlegm production in the air tubes.

You can well imagine that all these changes lead to one thing – air-way narrowing and reduced space for air to come into the lungs.

This is what causes wheeze and breathing difficulty. A normal person breathes without effort or being aware of breathing. For an asthmatic, breathing becomes a major task. Imagine trying to drink coke from a straw which is all twisted up!

If these effects of asthma are not treated and are not well controlled it leads to this narrowing becoming permanent. This occurs after years of uncontrolled asthma.

It must also be remembered that the lungs per se are normal in asthma. The problem mostly lies in the air tubes.

26 How is asthma diagnosed?

How is any disease diagnosed? It's usually a simple 3 step process.

1. The doctor will listen to the patient's symptoms and how they have developed.
2. The doctor will examine the patient.
3. The doctor will conduct certain tests.

Diagnosing asthma is no different and it is usually not difficult to diagnose asthma. A typical history of cough, wheeze, chest tightness and difficulty in breathing that happens more in the early morning hours or late at night or on change of season is highly suggestive of asthma.

A personal history during childhood of other allergies like food allergy, skin allergy or eczema or a family member having some other allergic disease lends support to the diagnosis.

Asthma is usually confirmed by doing a PFT (pulmonary function test) or spirometry. This is a test where the patient is made to breathe in to a machine which measures the volume of the air coming out of the lungs over a period of time. In asthma, breathing out air is difficult and slow. After giving an inhaled bronchodilator, an improvement in the air flow of 12 percent or greater clearly establishes the diagnosis of asthma.

Some simple blood tests are usually performed like the TLC and DLC. They reveal that eosinophils, a type of white blood cells, are increased. This is commonly called eosinophilia. Eosinophils

are also found in the sputum of asthma patients. IgE, a type of immunoglobulin, is also increased in allergic asthma.

To know what causes asthma in a given patient an “Allergy Test” is done by Skin Prick Test. Commonly tested allergens are food items, pollen, fungal spores and various types of dust.

It may be remembered that the chest X-ray is usually normal in asthma and CT and MRI are not required to diagnose simple asthma.

27 What is eosinophilia and what is IgE?

People who have confirmed asthma or are suspected of having asthma are often asked to do certain blood tests. Two very commonly done tests are blood eosinophils and serum IgE.

What are these tests and what do they indicate? Lets, find out.

There are two major kinds of cells in the blood: red blood cells and white blood cells. The red blood cells have haemoglobin and carry oxygen from the lungs to all parts of the body. The white blood cells are of many types and serve the broad function of “Immunity” and protect the body from various infections.

Eosinophils are a type of white blood cell. They constitute roughly 1 – 4 percent of the total white cells.Their normal job is to protect the body from worms (like hook worms, pin-worms and round-worms). If there are worms in the intestines, the number of eosinophils in the blood increases dramatically, so as to be able to fight and kill the worms. The percentage of eosinophils in the blood may go up to 20 – 30 percent. The increase in the number of eosinophils is called “Eosinophilia”

Eosinophils in the blood are also increased in allegic diseases like allergic rhinitis, asthma and atopic dermatitis. The increase is usually proportional to the severity of the disease. It is very easy, and inexpensive to count the percentage of eosinophils in blood by taking a blood sample, spreading a drop on a slide and examining it under a microscope. Therefore, this is a very good way to first diagnose the disease and later to follow it up to see the improvement, or lack of it.

The body's immune system also makes certain antibodies called Immunoglobulins to ward off diseases. These are of five major types: IgG, IgA, IgM, IgD and IgE. IgE levels are found to be high or very high in people who have a natural or inborn tendency to have allergies. IgE is, thus, a measure of the "innate tendency" to have allergies.

IgE levels can come down with avoidance of the known allergens. Immunotherapy or Allergy Shots also reduces the IgE levels in most cases. Thus, it is a useful test to follow-up the response to treatment.

28 What is spirometry or PFT?

Spirometry simply means measuring the breath. It is a simple test to measure the functioning ability of the lungs. It can measure how much air the patient can breathe in or out (inhale and exhale) i.e. the lung volume. It can also measure how fast one can breathe out i.e. the flow.

In asthma, the main problem is that the air tubes get constricted or narrowed. This causes wheeze, chest tightness and shortness of breath. The spirometer can easily quantify this narrowing by measuring the flow of air during expiration, or breathing out of air, which is slower in asthma.

To give a simple example: let's say, a normal adult can forcefully breathe out all of the air from the lungs (about 4.5 litres) in 3 seconds giving the rate of 1.5 litres per second. In asthma, however, emptying out the lungs may take 9 seconds. Thus, the flow of expiration becomes very slow at half a litre per second.

Furthermore, the test is usually repeated after 10 to 15 minutes of giving an inhaled bronchodilator (medicine to relieve the narrowing of the air tubes). If an improvement of 12 in the flow of air is seen, it is called a reversible airflow obstruction. This is highly suggestive of asthma.

Doing a spirometry well requires an experienced technician to coach and get the best out of the patient. Cooperation and a good effort from the patient is also necessary.

Children younger than 5 years of age can rarely perform this test.

This test is done to:

- Make the diagnosis of asthma.
- Follow-up the patient to see if they are improving with treatment or not.
- Reduce or stop the asthma medication once the lungs function has become normal.

29 Allergy testing

Once it is established that the patient has asthma and the asthma is allergic in nature, the next question that arises is - allergic to what?

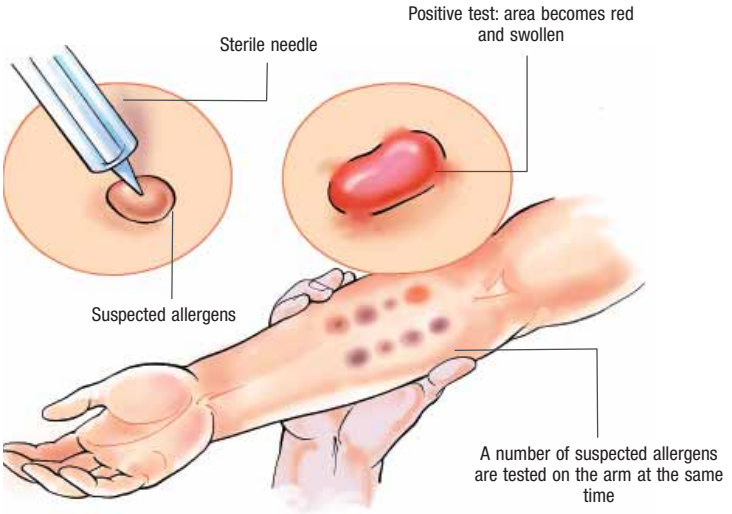
The substances that cause allergic asthma (called allergens) are pollen of weeds, grasses, trees, fungal spores, dusts of various types, certain food items, certain medicines, etc.

The allergy tests are required to pinpoint as to which of these are causing the allergic reaction in the particular patient.

Broadly speaking, allergy tests are of two types:

- Those which check allergy from drawn blood.
- Those which check allergy directly on the skin of the patient.

Skin Prick tests



In the skin prick test, a tiny quantity of the dilute form of the allergen is pricked into the skin. Forty to eighty common allergens are simultaneously checked. The test area is the forearm or the back. It is only mildly painful; a skilled doctor can easily do it in children above 5 or 6 years of age. If the patient is allergic to the tested allergens, a local skin reaction occurs in the form of a tiny, itchy, red wheal, which appears in about 10 to 15 minutes and usually subsides on its own in 45 minutes or so.

The reaction can be properly graded and interpretations drawn.

A positive skin reaction in conjunction with clinical suspicion is very strong evidence that the said allergen is the culprit.

A negative test practically rules out the allergen as the cause of asthma.

The patient should not be taking anti-histamine tablets prior to the allergy test.

Blood tests for allergy

These are not as reliable as the skin tests. In these kinds of tests, the blood is drawn and serum levels of the specific IgE are measured for the different allergens. These sometimes over-diagnose allergy, i.e. the blood test says that the patient is allergic to such-and-such allergen, whereas there is no true allergy to that allergen.

So these tests should always be viewed with caution. This is particularly true with testing for food items. Asthma being truly caused by allergy to a particular food item is rare. But, many a times I see patients carrying a blood report saying they are allergic to a multitude of food items. They avoid these food items yet they don't get any relief from their asthma. They do, however, develop serious nutritional deficiency!

Blood tests for allergy do have a small place in the diagnosis of allergy in the following situations:

1. In very small children where a skin prick test will be difficult.
2. Extensive skin disease with no normal-looking skin available to do the tests.
3. The patient has taken anti-histaminic, which would suppress the skin test reactions.
4. The patient is mortally or irrationally afraid of needles.

30 Why is it so hard to accept the diagnosis of “Asthma”?

When a patient goes to a doctor with his or her problem, the doctor will do an examination and perform certain tests and reach a diagnosis. The doctor will say, “You have malaria” or “You have diabetes.” This pronouncement is distressing, but it is not hard to believe.

But, many a times, when a diagnosis of asthma is made, the patient would find it hard to believe that he/she actually has asthma. What is it about asthma that patients find so difficult to accept?

There are many reasons behind this. It makes for an interesting analysis. Let us look at the reasons closely.

❶ Acute versus chronic diseases. Malaria is an acute disease. It comes and it goes. It can be cured. Asthma, diabetes and high blood pressure are chronic diseases. They are there forever. The patient has to live with it. Therefore, psychologically, it is harder to accept this reality.

❷ Diagnosis is not cast in stone. Many diseases have very clear-cut signs and symptoms which make the diagnosis apparent even to lay-people. For e.g. shaking chills and rigors of malaria, passing too much urine in diabetes, or body aches in dengue. Moreover, diagnostic tests for many diseases are quite conclusive. For instance – your blood sugar is 240 mg. or your platelets are only 40 thousand." There is no ambiguity.

In asthma, we do not have the luxury of that kind of certainty. The signs and symptoms are varied in different patients. Some patients will have all the classical symptoms of chest tightness, cough, difficulty in breathing and wheeze. Some patients may have cough as the only symptom of asthma.

Moreover, there is no single test which confirms the diagnosis of asthma (unlike diabetes where blood sugar levels clearly define the diagnosis). In asthma, tests of blood, sputum and lung function clearly point towards a diagnosis of asthma and an experienced doctor can be reasonably sure of the diagnosis. But for the patient, there can be room for doubt.

❸ A natural disinclination to accept that one has a chronic disease. It is human nature to deny, for as long as is possible, that there is something wrong with the body. And if that person generally takes good care of herself (for e.g. if he

or she exercises regularly or does yoga); then the thinking process is in the line of "I take so much care of my health, how can I get asthma?"

4. Diagnosis in children. When a doctor is seeing a child who wheezes, even the doctor cannot be sure if this is really the beginning stage of asthma or it is a temporary wheeze due to a viral infection. Only the passage of time will clarify the issue.

5. Waxing and waning nature of asthma. Asthma is not equally severe all the time. In some seasons, it is really bad and in others it is quite under control. Moreover, in some cases, it can go into long periods of remission. When that happens, the patient naturally feels she is "cured." The truth is that the "tendency for asthma" is always there and it can, and often does, re-appear later in life.

6. Social stigma attached to it. This used to be a big deal earlier – just as it was with tuberculosis or epilepsy. The younger generation of today accepts it more easily.

So what is the harm if the patient does not accept the diagnosis? Denial only leads to treatment not being taken. The air tubes remain inflamed and constricted and this leads to irreversible changes and damage. Over the years, the asthma becomes permanently irreversible.

31 What are the broad aims of asthma management?

Asthma is a chronic condition that can not be cured but can be controlled.

The aims of asthma management are as follows:

- There should be no day-time symptoms.
- There should be no night-time symptoms.
- The patient should be able to take part in all the activities, including sports, that other people engage in.
- The lungs should function as close to normal as possible.
- The lungs should not become weak due to asthma.
- There should be no asthma attacks and no need for hospitalization.
- There should be no adverse effects of asthma medication.

Therefore, what we are asking for is:

- No symptoms or limitations.
- Normal lung functions.
- No side effects.

Is that asking for too much? Not really!

Most patients of asthma (approximately 95 percent), if they are managed well, can achieve that easily.

What does it take to achieve this?

A well-informed and cooperative patient who observes precautions and takes the prescribed preventive medications.

A knowledgeable, experienced and empathetic doctor to guide the patient through thick and thin.

32 Drugs for asthma

Q Why are there so many types of anti-asthma drugs?

Asthma varies in frequency and severity. The causes are varied and many. In order to fulfil different needs, different drugs have been developed and are available.

Q What are the major types of anti-asthma drugs?

While the pharmaceutical companies make hundreds of brand-name drugs, there are only a few major types of anti-asthma drugs that are now used. Essentially, these are of two types: quick relief type (A and B) and controller type (C and D).

A. Bronchodilators:

a. Xanthenes: Aminophylline, Deriphylline

b. Beta-adrenergic: Salbutamol, Salmeterol, Terbutaline, Bambuterol, Formoterol.

B. Anticholinergics:

- Ipratropium
- Tiotropium

C. Corticosteroids:

a. Inhaled:

- Beclomethasone
- Budesonide
- Fluticasone

b. Oral:

- Prednisolone
- Betamethasone
- Dexamethasone

D. Leukotriene antagonists:

- Montelukast

Q What are xanthenes and how do they act?

It has been known since ages that the decoctions of some herbs are helpful in cases of asthma. These herbs include stramonium and dhatura. Scientific analysis of these herbs has revealed that they contain a variety of active principles that all come under the class xanthenes.

Xanthenes reverse the airway obstruction in cases of asthma, thereby providing quick relief. It is for this reason that the xanthenes are called bronchodilators.

Theophylline, deriphylline and aminophylline are the generic types of drugs that belong to the xanthenes class. There are dozens of brand names for each of them.

Q How long does the effect of a theophylline tablet last?

The effectiveness of theophylline or other xanthenes lasts from 4 to 8 hours. Therefore, the drug has to be taken several times a day at regular intervals in order to control asthma. Special long-acting forms are available that may make it necessary to take the drug fewer times each day. Theophylline and other xanthenes do not appear to lose their effectiveness with long-term use.

Q What are the side effects of theophylline or deriphylline?

They do not have serious long-term side effects. However, there can be acute side effects that are produced when the dosage is too high. These involve the stomach and

the nervous system. The effects on the stomach include nausea, vomiting, loss of appetite and stomach aches. The effects on the nervous system include irritability, dizziness and changes in personality. When any of these symptoms occur, side effects from the xanthenes drugs should be suspected.

Q What are adrenergic drugs and how do they act?

These drugs act upon particular sites called receptors on nerve cells of the "adrenergic" nervous system (commonly known as the sympathetic nervous system). There are three main types of receptor sites called alpha, β-1, and β-2. These receptor sites are located in the airways, but they are also found in other parts of the body as well, including inside the heart muscle and muscles in the arms and legs.

Some adrenergic drugs act on all three types of receptor sites but others are more selective.

Q Which are the most effective adrenergic drugs?

The most effective bronchodilator drugs are the ones that primarily influence the beta-2 receptors, which are present only in the bronchial airways. They cause fewer side effects. Since they dilate the airways, they are called bronchodilators. Examples are salbutamol and terbutaline. They are available in tablet form and as aerosols in metered-dose inhalers and nebulizers.

Q What are adrenocorticoids and how do they act?

Adrenocorticoids, commonly called steroids, are related to cortisol, the hormone that is produced by the "cortex" or outer part of the adrenal gland. A number of closely-related synthetic compounds are available and used. These include hydrocortisone, prednisone, prednisolone, betamethasone, triamcinolone and dexamethasone. They are known by a variety of brand names.

The steroids are strong anti-asthma drugs. They decrease inflammation of the airways and, thereby, reduce frequency and intensity of the attacks.

Q What are the side-effects of steroids?

The side effects which arise with steroid treatment depend very much on the level of the dose and how long the steroid is taken. Major side effects take months to develop. Therefore, treatment for a few days or a few weeks to help a patient over an acute flare-up is a safe procedure that rarely causes problems.

Q What is the role of inhaled steroids in asthma?

In recent years, several types of steroids have become available in the form of an inhaler. These are sprayed in much smaller quantities and directly into the lungs where they exert most of their action. This means of delivery puts the drug exactly where it is going to work and avoids many of the side effects that occur when steroids are taken by mouth. This is clearly the best method and the best treatment for most asthma patients.

33 When are inhaled steroids used?

When are inhaled steroids used in asthma?

The short answer is: “Almost always.”

The most characteristic abnormality in asthma is the presence of an inflammation in the inner lining of the air tubes. This inflammation releases certain abnormal chemicals that cause three major effects:

1. Mucus or phlegm production
2. Constriction of air tubes
3. Air tube wall thickening

If not checked in time, these changes can lead to permanent damage to the bronchial tubes.

Inhaled steroids are the most effective method to curb this inflammation in the airways of asthma patients. Once this inflammation is completely erased, all the effects of asthma enumerated above are gone. Thus, there is no constrictor chemical left to constrict the air tubes. Hence, no need for bronchodilators.

Trying to avoid inhaled steroids and only taking bronchodilators to give some quick relief is actually like taking Combiflam for malaria. No doubt the fever will come down temporarily, but will this cure malaria? No! On the other hand, if anti-malarials are taken, then one does not need to take Combiflam anymore.

Hence, almost all asthma patients benefit from inhaled steroids.

The treating doctor will eventually reduce the dose to the minimum level that is effective. Many asthma patients will require it only during a change of season and not all the year round.

34 When are oral steroids used?

When are oral steroids used in asthma?

The short answer is, “very rarely, in an acute attack and only for a short period.”

When there is an attack of asthma, the patient struggles to get good breaths. He or she cannot speak in a full sentence. Oxygen saturation is low. It’s a potentially dangerous situation.

In this situation, something has to be done to help the patient get out of the attack. This is where oral steroids prove useful.

Inhaled or even nebulized steroids will fail in this situation simply because they would not be able to reach the deeper recesses of the lungs due to the severe degree of air tube constriction.

These kind of attacks usually happen due to the following different scenarios:

1. The patient has been advised to take controller inhaler but is not taking them. This is the most common reason for attacks.
2. If a viral, respiratory infection takes place. This is particularly common in children.
3. Simply too much pollen load during the change of seasons.
4. Extreme environmental trigger load that happens during major cleaning or white-washing of the house or at Diwali time.
5. Extreme emotional upsets.

Are steroids too dangerous? Should they be avoided?

A severe attack of asthma that is not getting better with other treatments is dangerous. A short course of oral steroids for severe asthma can often keep the patient from being rushed to the hospital or in an extreme case, can save a life. Many asthmatic patients have said that when you need them, oral steroids "work like magic." If needed to treat severe asthma, oral steroids should not be avoided; they should be taken promptly. Certainly, they should not be taken for a long period of time.

A short course of steroids

Most often, they are prescribed for a short period of time: a short course may be as brief as 3 – 4 days or as long as 2 – 3 weeks. They are stopped when the asthma has gotten better and other treatments suffice to keep it under control.

Variable doses and schedules

- Usually half a milligram of oral prednisolone per kilogram of body weight per day is enough. For example, if your weight is 60 kilograms, a dose of 30 mg would usually be enough. The duration may be as short as 3 days, especially in children or may be up to a week or two in adults. Moreover, 10-day courses can be stopped abruptly and there is really no need to taper them off.
- The doctor may decide that all the necessary medication should be taken as a single dose in the morning or spread over the day in two or three doses.

Effects of a short steroid course

The beneficial effects of oral steroids are usually evident within several hours. Breathing becomes easier and wheezing, cough, mucus production, and chest tightness all gradually lessen.

Other allergic diseases, such as eczema and nasal congestion and drip, are also likely to be helped by the anti-inflammatory action of the oral steroids.

Undesirable side effecs of a short steroid course

Undesirable side effects of oral steroids can happen, even during a short course. Any individual person may experience none, some, or all of these side effects, which generally go away quickly when the medication is stopped. These side effects include: stomach irritation (indigestion), fluid retention causing a sense of bloating, hunger, sleeplessness, short temper, and difficulty concentrating. Women may have their menstrual cycle become irregular for a brief while and may develop a vaginal yeast infection. To avoid some of these side effects, take your oral steroids with food and, if necessary, antacids (for example, Digene) to minimize stomach upset. Avoid excessive salt intake (to minimize fluid retention and bloating). And, yes, avoid heavy alcohol consumption.

When the steroid dose is being tapered or stopped, one may experience a different set of side effects. These include: a stiffness or aching in the joints, lack of energy and appetite, and sadness. Bear with them; these side effects will go away in a short while, generally within a few days.

35 What is the role of montelukast in asthma?

Montelukast is a medicine for the treatment of asthma, which came into clinical use in the early nineties. It is a leukotreine-receptor blocker. Leukotreines are chemical mediators that are released by the body's white blood cells in abnormal quantities in asthma. Leukotreines can cause inflammation of the inner lining of the airways and a spasm of the muscles of the air tubes, thereby leading to narrowing of the airways and wheeze.

When they came into clinical use, there were a lot of expectations because this was an entirely new treatment for asthma. It has not lived up to its expectations.

SOME GOOD POINTS ABOUT IT: It a is an extremely safe medicine. Other than minor gastro-intestinal symptoms, there are no major side effects. It is a tablet to be taken by mouth only once in a day. All these qualities, especially when compared to inhaled steroids, are liked by the patients.

However, it is not as effective as inhaled steroids in preventing asthma.

Its usefulness could be in the following situations:

- In small children with asthma who find it difficult to properly inhale medications
- In asthma patients who are afraid of or who refuse to take inhaled steroids – as a second-best option. Something is better than nothing!

- In patients with a mild form of asthma with allergic rhinitis. It may be better to take a single tablet rather than put inhaled steroids in the nose as well as in the airways.
- Aspirin-induced asthma.
- Exercise-induced asthma.
- Younger children do better with montelukast than older adults.

Recently, it has been shown that viral-induced wheeze can be minimized by montelukast.

36 Inhaler devices for asthma

Broadly speaking, there are two ways of delivering a drug to the body – by mouth (tablets, capsules or syrups) and by injection (in the vein or in the muscles).

In asthma, we have another very good route of drug delivery – by inhaling the drug.

So, for asthma, we can have:

- Injections
- Tablets
- Inhaled medication

Let us look at them one by one.

❶ Injections: Their usefulness lies in the fact that they act very quickly and, hence, can be used in an emergency. With inhaled medications now available (which also start working very quickly), the use of injections has gone down considerably.

❷ Tablets: They are cheap. Since they go to all the parts of the body (and not only to the lungs where they are required), they cause side effects.

❸ Inhaled medications: This is the best way of drug delivery in asthma. Very tiny doses of the medicine reach the lungs directly where they are required. Since it is not reaching the other parts of the body, there are no significant side effects.

Inhaled medication could be taken through many kinds of devices:

- Pressurized inhalers
- Dry powder inhalers like the Rotahaler and Revolizer

- Diskhalers and Turbohaler
- Nebulizers

Each of these device has its advantages and dis-advantages. Discuss these with your asthma specialist to find which device could be most suitable for you.

Some general comments on inhalers:

- They are the most efficient method of drug delivery for asthma.
- They are the first line treatment and not the last resort.
- They are not habit forming.
- Unless they are taken perfectly, the full dose of medicine does not reach deep down in the lungs. There are many pitfalls in their use. Have your asthma specialist explain and demonstrate the proper use. It is my experience that most patients use them wrongly and, thus, don't get the desired benefit. Most patients think that since they have been using it for a long time they know how to use them. But there is always scope for improvement.

37 Are antibiotics useful in asthma?

NO, BY AND LARGE, THEY ARE NOT.

Asthma is not an infectious disease. Respiratory infections do make asthma worse or cause an attack of asthma. But these are usually viral infections and, as such, antibiotics are neither required nor are they useful. On the contrary, they kill the good bacteria in the body and cause antibiotic resistance and could be actually harmful.

Let us visualize a usual or common scenario. A patient of asthma gets a sore throat, runny nose, fever and body aches and in a day or two, the asthma gets much worse. He or she goes to the doctor and asks some strong medicine because he or she cannot afford to miss office. The doctor prescribes antibiotics but the patient is no better.

Below are three well-known medical facts:

- 90 percent of the upper respiratory infections are viral.
- 90 percent of the doctors know this fact.
- 90 percent of the time, the patient ends up getting an antibiotic!

Resist taking antibiotics for a common cold. Unless there is a good reason – Such as these:

1. Phlegm that is clearly yellow (green phlegm does not indicate bacterial infection in an asthmatic – it is due to eosinophils in the sputum.

❷ Fever, which had gone down, comes back again.

❸ Throat swab test confirmed bacterial infection.

❹ Bacterial sinusitis.

❺ Your doctor clearly feels antibiotics are necessary.

Some patients with severe asthma have a chronic infection of chlamydia or mycoplasma in the lungs as one of the reasons why their asthma is severe. Such patients may benefit from a prolonged course of certain specific antibiotics.

Asthma is often associated with sinusitis. When there is bacterial infection in the sinuses, as evidenced by pain and tenderness over the sinuses, pain in the upper teeth, dirty or yellow discharge from the nose and radiological evidence of pus in the sinuses, then antibiotics are required. In this situation, antibiotics relieve not only the sinus symptoms but also help in better control of asthma.

Other than these few exceptions, antibiotics have no role in the day-to-day management of asthma.

The over use of antibiotics for common childhood asthma is believed to be one of the reasons behind the alarming increase in asthma in children. When we start using antibiotics at the drop of a hat, we do not allow our natural immune system to exert and develop. Our immune system is then misguided and mis-directed and start reacting to harmless substances in the environment. This leads to allergy and asthma.

Note: Also see the chapter on food allergies and antibiotic overuse on page 54.

38 Are inhaled steroids safe?

Inhaled steroids are the standard treatment for the prevention of asthma. That they are highly effective is well known. We can now confidently say that they are very safe too.

Inhaled steroids have been used to control the allergic inflammation of asthma for the last 30 – 40 years. So, we have a sufficient body of safety data. In the usual doses, they are absolutely safe. Safe even for pregnant women and for small children.

In the inhaled form, a very tiny dose of the steroid is administered directly into the air tubes where it is required. It does not have to go through the blood stream. A very tiny portion of this does get absorbed from the lungs and the mouth but this is negligible when compared to the body's own production of steroids. Yes, the body produces steroid hormones every day. We could not survive without it.

Here are some points to remember:

- The steroids used to treat asthma are corticosteroids – a copy of the steroids produced naturally in your body.
- They are completely different from the anabolic steroids used by bodybuilders and athletes.
- Inhaled steroids go straight down in to the airways, so very little is absorbed into the rest of the body.
- Your doctor will prescribe the lowest possible dose sufficient to control your asthma. Once the asthma is well controlled,

an attempt should be made to carefully reduce the dose of the inhaled corticosteroids in order to see if the control is maintained at the reduced dose. This reduction should be attempted every 3 months or so.

- Children should be monitored closely, especially for growth.

Decades ago, when these medicines were not available, the asthma would inevitably damage the lungs permanently. One should thank God that they are available now.

Fact is, inhaled steroids are an asthmatic's best friend!

39 Side effects!

Is there anything in this world that has no ill effects? Even water, when taken in excess has bad effects. I have recently started playing badminton. That exercise is very good for my health, but it gives me aches and pains in the muscles. I have to accept and tolerate that. Everything has benefits and risks. It's a question of striking the right balance. Medicines or drugs also have both good and bad effects. Usually, the good effects are many and the side effects are only minor, and it would be prudent to accept that as part of the deal.

Drugs used for asthma, like any other drug, can also cause side effects. Fortunately, many drugs for asthma are given by the inhaled route and, hence, the dose is greatly reduced and the drug only reaches the inner wall of the air tubes and, therefore, the bad effects are largely minimized. Yet, some unwanted or bad effects could happen.

Let us try to understand this in some detail:

- What are the common side effects of asthma medicines?
- How serious are these?
- Should one not take medicines because of this fear?
- What could be done to minimize the side effects?

Quick relief medicines: Whether taken via an inhaler (salbutamol) or as a tablet (deriphyllin), all quick relief medicines cause tremors and palpitations (heart beating faster). Fortunately, this is not severe and usually lasts only for a few minutes to an hour and, eventually, the patient gets used to it.

Inhaled steroids: Patients and parents of asthmatic kids are so

afraid of steroids. As if this is a poison. Are they safe? What is the truth?

Let me put before you a couple of facts:

- Steroids are a normal hormone of the body, which is produced in the body every day. They are, in fact, essential for life.
- When given through the inhaled route, only a small fraction of the microgram dose is absorbed in the blood-stream.
- They are safe for pregnant women and in children.

When taken over prolonged periods, that is for years, they may cause some growth retardation in children and some early cataract and bone thinning in older adults. This could happen if the dose is more than the usual dose or in certain individuals who are exquisitely sensitive to steroids. Therefore, it is always wise to use the lowest dose of inhaled steroids that keeps the asthma under good control. The doctor will always try to reduce the dose once the asthma symptoms are under good control. For this purpose, monthly monitoring is required.

Oral steroids: Oral steroids are reasonably safe for short courses, that is for up to 5 – 10 days, but not longer. Increased appetite, bloating, pimples, acidity and mental agitation may occur in some patients. These bad effects pass off soon on stopping the course. Since short courses are only required in an emergency, the good effects are far more than the bad ones.

Prolonged use of oral steroids is dangerous and should be avoided at all cost.

I ALWAYS MAINTAIN THAT "BAD DOCTORS AND BAD PATIENTS HAVE GIVEN STEROIDS A BAD NAME" as a result of which, good patients will suffer the consequences of the disease by trying to avoid medicines.

So should one avoid taking asthma medicines because of the

possibility of side effects? Most certainly not. The benefits of regular medicines are too many. The dangers of allowing the disease to go unchecked are also too many. If a few side effects do occur, it is very small price to pay for the many benefits.

What can be done to minimize the side effects?

Use the minimum dose that works for you. Your doctor will help you to reduce the dose. Always rinse your mouth, do gargles and brush your teeth (these are three different things) after using the inhaled medication. This must be done if inhalers or nebulizers are being used. When inhaled medicine is used, a lot of it (70 – 80 percent) is stuck in the mouth. This is inevitable. This is not useful for the patient because there is no disease in the mouth. On the other hand, this will get absorbed through the saliva into the blood-stream. Hence, the mouth must always be rinsed out after using an inhaler.

Medicines, like everything else in life, have both risks and benefits. Putting your hard-earned money in mutual funds rather than in fixed deposits also has both benefits and risks. Medicines are no different.

Asthma, usually, tends to afflict a person lifelong. Unchecked asthmatic inflammation of the airways can permanently damage them. Medicines for asthma, as we have noted above, can have side effects. The best thing to do would be to use the medicines carefully so that the disease is also well controlled and yet there are no significant side effects. So, we have to tread carefully on the path that lies between the devil and the deep sea. Fortunately, this is relatively easily done in a majority of the patients.

40 Allergy shots: Are they worth the effort?

There are three basic methods to manage allergies:

- Try to avoid the allergen.
- Control the symptoms with medicines.
- Reduce the allergy or hyper-sensitivity through allergy shots or immunotherapy.

The first is obviously the simplest and the safest method. It will work well when there is only one allergen, say, for example, prawn allergy. The treatment is simple – don't eat prawns. But how does one avoid pollen?

Taking drugs like Avil or cetrizine helps in controlling the symptoms immediately; but for only as long as the effect of the drug lasts. They also have side effects – most notably, drowsiness and sedation. They are not getting to the root of the problem. For asthma, inhaled corticosteroids need to be taken over a long period of time.

That's where immuno therapy or allergy shots score. They are capable of curing the allergy, reducing the hypersensitivity, and preventing the development of new allergies, with the benefits lasting even years after stopping the shots, and they are not expensive either. So much for their positive attributes. The not-so-good points are that they have to be given repeatedly over a long period of time (usually 3 years) and do not help all patients equally. The usual experience is that about 60 percent of patients get very good relief, 30 percent get some relief, and 10 percent get very little or no relief with this therapy.

❶ The principle

A vaccine is made with the specific substances that the patient is allergic to. These could be pollen, house dust or fungal spores. Increasing doses are given as an injection under the skin in the upper arm, initially weekly, then fortnightly and then monthly. By doing this, the patient's immune system becomes tolerant to the offending allergen. This tolerance is long-lasting.

❷ Which conditions can be helped by this?

Allergic rhinitis, allergic asthma and bee sting allergy.

❸ Which conditions are generally not helped by this?

Urticaria and food allergies.

❹ Is it safe?

It’s not a drug. It’s a vaccine made from natural substances, but to which the patient is allergic. Local reactions in the form of itching and minor pain at the injection site are common. They are not troublesome, do not require medication and, in fact, reassure the patient and the doctor that the vaccine is working. Very rarely, systemic reactions can occur soon after the vaccine. can occur. This would cause increasing the symptoms of the basic disease such as sneezing or wheezing. Blood pressure could drop. Fortunately, these are very rare. It is for this reason that the patient has to wait in the doctor's clinic for 10 – 15 minutes after the shot.

❺ How long is the course?

It is usually for 3 years. After that, it could be stopped. A majority of the patients continue to receive the benefits even after stopping the injections. In some patients, the symptoms start coming back. In these patients, the vaccine is continued on a monthly basis.

❻ Which type of patients get the maximum benefit from immunotherapy?

- Younger patients.
- Allergic rhinitis patients.
- Milder asthmatics.
- Those with clearly seasonal allergies.
- Those with lesser number of allergens.

41 What is a nebulizer? Pros and cons

A nebulizer is a medical device that converts liquid medicine into a vapour, mist or aerosol so that it can be inhaled directly into the air tubes or lungs. It uses electricity to generate compressed air, which that converts the liquid form of the medicine into vapours – much in the same way as an old-style-Flit sprayer does.

It has a power lead, a compressor, tubing and an openable plastic chamber into which the medicine solution is put. On turning it on, the aerosol is released, which can be inhaled through the mask or mouthpiece.

Two classes of broncho-dilators and a couple of steroidal solutions and their combinations are currently available for use by asthmatics. A reasonably good nebulizer costs around ` 2,000/- or so. They are usually very sturdy and last a long time.

Advantages

- Invaluable for small children who just cannot use any other inhalation device.
- Useful for old people who cannot coordinate inhalers.
- Useful in an acute attack situation for home self-use.

- Having a nebulizer at home is a psychological support to the patient that effective help is at hand.
- Some very severe asthmatics get more relief with nebulized medicines as compared to the usual inhaler devices.

Disadvantages

- The cost of treatment goes up considerably. If the same usual asthma medication by inhaler is about 6 rupees a day, by nebulizer it would cost 60 to 80 rupees a day. For a few days' treatment, that would not matter much. But for long-term treatment, it would be a concern for most.
- There are chances of infection from the unsterile chambers or tubings going into the lungs, especially with long-term use.
- A lot of drug is wasted – in the form of the vapour that is coming out from the side.

Practical tips

- Inhale deeply through the open mouth and nose.
- Don’t worry about the vapours escaping from the sides – that’s normal and expected.
- The chamber and tubing should be cleaned with running water after each use.
- Once a week, it should be dipped in one part of white vinegar and four parts of water for 20 minutes for sterilization.
- A respule normally contains 2.5 – 3 millilitres of solution, which should finish in about 7 minutes. If it takes much longer, something could be wrong with the nebulizer or the filter could be choked.

42 What are the best ways to use inhalers?

Medication for asthma is best delivered by the inhaled route.

This can be done with these devices:

- Inhalers
- Rotahalers
- Nebulizers

To get the best out of these devices, the following must be kept in mind:

1. Shake the inhaler before use.
2. Breathe out completely with pursed lips to empty out the lungs before inhaling the medicine. This is of utmost importance. Most patients fail to do this and as a result, don't get the

medicine all the way inside their lungs and, thus, don't get the desired benefit.

3. After emptying out the lungs, put the device in the mouth and inhale deeply and fully. Remember, for the inhaler, you must inhale slowly and deeply and for the powder rotahaler, you must inhale fast and deep.

4. Hold the breath, and the medicine, in the lungs for about 6 – 10 seconds.

5. Exhale slowly through the nose if you also have nasal allergy symptoms. Otherwise, exhale through mouth.

6. Don't forget to rinse the mouth and do gargles after each inhalation. This is necessary to remove the medicine that unnecessarily gets deposited in the mouth and throat. This medicine should be washed away otherwise it will get absorbed in the body or cause local side effects such as hoarseness or local thrush (a fungal infection).

7. Always remember to carry your inhaler when you visit the doctor. You can demonstrate how you use it and the doctor will be able to correct any deficiency.

8. Remember, it is possible to get no medicine in the air tubes because of poor technique.

Nebulizers

- They are invaluable in an emergency.
- They are very useful for very small children and for elderly people.
- Their routine use for reasons other than the above is to be discouraged because the cost of treatment goes up considerably and there are chances of infection.
- Regular maintenence and cleaning of the devices is necessary.

43 Vitamins and supplements for asthma: Do they work?

The concept of taking vitamins and supplements for good health and to prevent or cure disease is attractive.

If popping a vitamin pill or eating more or less of this or that can help in a disease, then what could be better!

Diet certainly plays an important role in many diseases such as diabetes, high blood pressure, heart diseases and gout, to name a few common ones.

But what about asthma?

Scientific studies have shown that asthmatics have a deficiency of the following in their blood and body:

- Vitamin A
- Vitamin C
- Zinc
- Vitamin D
- Magnesium
- Flavonoids

They also have more salt (sodium chloride) in their blood.

Thus, it was logical to try to supplement the vitamin or mineral deficiencies in the asthmatics with the hope that it would, at least partly, correct the asthma. But supplementation corrected the blood levels but did not help the asthmatic individual with his or her asthma.

Just to explain why this is so, let us take a more familiar example – that of vitamin C and the common cold. Vitamin C deficiency is associated with lower immunity and more frequent common cold infections. For many years, vitamin C was prescribed for

the prevention and treatment of common colds. Now we know that it does not work. It is a waste of time and money.

There is no debate about the fact that vitamins are absolutely essential for good health and to keep away diseases. But the right vitamins, in the right proportions, along with other vitamins and minerals – as is available in fresh fruits and vegetables – is what is required and what works. The same vitamin in isolation in the form of a pill cannot replicate the good work.

Much has been written about the 'Mediterranean diet'. This is a diet that is rich in fresh fruits, vegetables, nuts and olive oil. Wherever this kind of diet is eaten, the incidence of asthma is less. But this benefit is observed over generations rather than in a single patient.

So what is the bottom-line? Eat a good balanced diet rich in fruits, vegetables, seeds, nuts (provided you are not allergic to nuts) and olive oil. Get adequate exercise and sun exposure. AND DON'T WASTE TIME, MONEY AND EFFORT ON VITAMIN PILLS.

44 Precautions against pollen allergy

Pollen is the term for the fine dust, often yellowish in colour, that is found on flowers. If you take a rose or marigold flower and touch the top and central part, you'll get yellow - coloured sticky dust on your fingers. That is pollen.

Pollen grains are actually the male seeds of the plants. They have to pollinate the female seeds for the plant species to propagate. This transfer happens through birds and insects in the case of the sticky and heavy pollen of beautiful and fragrant flowers, which are attractive to birds and insects.

There are other pollen from weeds, grasses and trees without these advantages. The birds and insects do not help them. They too have to propagate. Nature and evolution has made their pollen extremely light and these pollen are produced in abundance. Hence, they simply fly away, sometimes miles, from their source till they happen to fall on the female part of the plant to pollinate it.

These two qualities of such pollen – their being very small and light and their abundance are actually responsible for them causing symptoms in allergic patients. They can easily gain entry into the eyes, nose, throat and lungs to cause symptoms.

These are the main symptoms:

- Itchy and watery eyes
- Sneezing, runny nose and blocked nose
- Throat irritation
- Cough, wheeze and difficulty in breathing.

Patients who have pollen allergies typically have these symptoms during a chance of season, that is in March – April and in September – October.

It is near impossible to avoid exposure to pollen. Studies have shown that if the pollen concentration is, say, 100 outdoors, then the pollen concentration indoors in a well-sealed air-conditioned room will be 70. But not zero.

Here are some simple precautions that can be taken by pollen allergy sufferers in the pollen season:

- Keep the doors and windows closed.
- Keep the windows of the public transport rolled up.
- Keep the air circulation in the car in 're-circulation'.
- Avoid using a “dessert cooler.” It tend to suck in a lot of pollen as well as fungus.
- Avoid taking a walk in the morning. That’s when the pollen counts are higher. A late-night walk would be better.
- Have a bath and change your clothes after coming in from the outdoors. A lot of pollen settle on the body and on the clothes.
- Avoid drying clothes and bed-sheets outdoors in the pollen season. Use dryers instead.
- Well-fitting masks help somewhat.
- Air purifiers, with a HEPA (high-efficiency particle arrestors) filter help only somewhat.

45 Precautions against house dust allergy

Q What is house dust?

It is the dust produced indoors from the break-down of animal and plant material used in the house. Such material includes cotton, wool, jute, hemp, animal hair, feathers, etc., used particularly for stuffing in mattresses, pillows, quilts, upholstered furniture and carpets. Skin scales from humans and a large variety of moulds (fungi) as well as dander and saliva from pets add to the mixture of house dust.

Q What is it in the house dust to which people become allergic?

It is the tiny mite of the species *Dermatophagoides pteronyssinus* which grows due to the constituents of the house dust. It feeds on the shed-off human scales; that is why it is called dermato (skin), phagoides (eats).

Q What does the house dust mite look like?

The mite has a body supported by eight legs. It is less than one millimetre in size, and can be seen only through a microscope. It is so light in weight that it can float about in the air when the bed room is cleaned.

Q Where in the house is the mite to be found most often?

It lives primarily in mattresses and also in carpets and upholstered furniture. The food it eats, that is the human scales or the rubbings from the skin, is found abundantly in the mattress because a person spends at least one-third of the 24 hours over there. The temperature of the mattress,

when the person is occupying it and giving it his or her own body temperature, is optimum for the growth of the mite.

Q Does the mite prefer any particular environment for its growth?

The mite grows best in humid, temperate climate. Houses with a dark and humid interior will have more mites in their house dust. On the other hand, high altitudes with a dry and cold climate are not suitable for their growth.

Q What is it in the mite that the people become allergic to?

Excretory waste products produced by these mites, which consist mostly of a protein substance, are the main substance to which allergic people react. Each mite excretes about 20 of these pellets every day. These pellets, minute in size, continue to cause allergic symptoms even after the mite that has produced them has died. Female mites can lay 25 to 50 eggs, resulting in a new generation being produced every 3 weeks.

Q Do the asthma patients allergic to house dust have any characteristic symptoms that are easily recognizable?

No. There are no characteristic symptoms of house dust allergy. Patients allergic to house dust are more liable to have perennial symptoms, with some aggravation in the rainy season when the humidity and temperature is more congenial for the growth of the mites. But this happens in the case of allergy to many of the fungi also, which collectively occur year-round.

Q Is there any connection between increase of asthma attacks during Diwali season and the house dust?

Yes. During the Diwali season, more asthma patients report with increased symptoms or severe attacks. Diwali festival is known for cleaning up of houses and decorating them.

Cleaning raises up a lot of dust. When an asthma patient is exposed to this house dust, he or she gets more symptoms of the disease or a severe attack.

On the day of Diwali, an asthma patient is exposed to polluted air due to the burning of crackers, which acts as another factor aggravating the symptoms.

Q Some asthma patients who go to the hill stations report lesser symptoms over there than they have in the same season in the plains. Why?

Temperature and humidity is low in the hill stations compared with the plains, in the season when people travel to the hills. This low temperature and humidity does not allow the mites in the house dust to grow luxuriously. Less concentration of mites in the hill stations may be the cause of fewer symptoms in asthma patients who are allergic to house dust.

At higher altitudes where the mites don't grow and there is very little vegetation and the pollen concentration in the air is nil or very low, such as at Leh in Ladakh, very few cases of bronchial asthma are seen, even though other chest diseases are seen in abundance.

Q Many times, students going from their homes to hostels report lesser symptoms of asthma. Why?

They may be allergic to house dust. The house dust in the hostel rooms has been reported to have lesser number of mites because of the austere nature of the furniture. Sparse furnishing also allows for better and easier daily cleaning of the hostel rooms.

Q How is house dust allergy diagnosed?

Taking a careful medical history, which includes the nature and timing of symptoms, is very important. A specialist,

generally, employs the skin prick test to detect the allergy. This test involves the injection of a tiny amount of house dust extract (allergen) to form a superficial bleb on the skin surface. The positive test consists of a raised itchy induration at the test site. Alternatively, a blood test is done to identify allergic individuals.

Q What is the response of house dust-allergic patients to injection treatment (immunotherapy)?

The response is best when the patient is allergic only to house dust. When the allergy is to other triggers also, the response is good but variable.

Q Does avoiding exposure to house dust help an asthma patient?

Yes, taking steps to minimize dust mite exposure in the bedroom, leads to lessening of symptoms. Emphasis is placed on the bedroom because it is the room with the greatest number of dust mites.

Q How can one reduce exposure to house dust?

The following measures are helpful in this regard:

1. Enclose mattresses and pillows in zippered, dust-proof covers.
2. Remove all the carpets. If this is not possible, an anti-mite solution should be sprayed periodically.
3. Avoid heavy curtains. Dry clean or wash them frequently.
4. Substitute wooden or plastic furniture for upholstered ones.
5. Wash blankets in hot water every few weeks. Avoid woollen blankets.

6. Place the contents of the bedroom or at least the mattresses in the hot sun fortnightly.

7. HEPA air cleaners can remove most of the air-borne dust particles.

8. Use a dehumidifier in damp places. Mites grow best at 75 – 80 percent humidity and cannot live below 50 percent humidity. Use a humidity gauge to maintain the humidity at 40 – 50 percent.

9. Wear a face mask when making the bed and doing house-cleaning.

46 Precautions against fungal spore allergy

All of us are familiar with the green-black fluffy growth that appears on a loaf of bread when it is left for a long time, especially in the rainy season. This is mould or fungus.

Moulds can grow on any decaying matter, both inside and outside the house. The moulds themselves aren't allergy-causing, but the spores they release are. Spores are released when there is a sudden rise in temperature in a moist environment. And they are released in very large numbers.

Moulds are everywhere. Like dust allergens, mould allergies are perennial and allergic people exhibit symptoms throughout the year, although levels rise in the autumn, during wet, mild weather and harvest time.

Fungal surveys have been done in Delhi. Fungal spores are present throughout the year. Peaks are found in the months of September to November and again in February to April, that is autumn and spring, respectively. It may surprise some, but the spore concentration is actually low in the rainy season. This is not unexpected. Rain makes the spores, and dust, settle down.

Moulds favour damp, musty conditions; therefore, piles of rotting leaves, grass cuttings, compost heaps, and garden sheds are prime environments for mould growth. Indoor moulds can be found on food that is rotting, such as the black and white fur that is found on cheese, bread, fruit and vegetables.

The refrigerator is a key mould environment if not adequately cleaned and dried, particularly around the seals. Other types of mould can be found on window frames, especially when there

is a lot of condensation on the windows, under wallpaper, and atop the soil of houseplants. Wall-to-wall carpets and moist bedding are fertile grounds for moulds. Likewise, the damp environments turn the kitchen and bathroom into danger zones.

Avoiding indoor moulds

Moulds flourish in damp environments. Therefore, one of the best ways to prevent their growth is VENTILATION.

- Avoid damp basements, compost piles, fallen leaves, and cut grass.
- Thorough cleaning of the kitchen and bathroom with subsequent ventilation of these areas will help prevent mould growth. Pay particular attention to the walls behind kitchen units and cupboards; the lack of ventilation often means that excess mould grows in these areas.
- Open the windows and close internal kitchen and bathroom doors when cooking, showering or bathing to prevent the steam from entering other rooms. Keep bathroom surfaces dry. Do not hang wet clothes inside the house.
- Do not let food decay. Clean and thoroughly dry problem areas such as refrigerator seals.
- Clean mould from window frames and dry condensation.
- Do not hang clothes in damp cupboards or pack clothes too tightly in wardrobes. Leave wardrobe doors ajar to ventilate the clothes.
- Strip wallpaper from damp walls. Tackle any areas of dampness on the walls and other areas.
- Avoid basements.
- Don't keep piles of old newspapers.

- Keep houseplants to a minimum and change the soil regularly.
- Do not use humidifiers.
- Indians generally have a bed box build into the bed. These are stuffed with blankets, quilts and old clothes. Often, mould grows here and the patient sleeps here for at least 8 hours. Clean and dry this. Putting neem leaves inside the box does not allow moulds to grow.

Avoiding outdoor moulds

- Do not go into damp and musty buildings.
- Avoid cutting the grass and raking leaves.
- Avoid country side areas during the harvest time particularly when sunny and windy.
- Do not spend time in buildings where hay or grain is stored.

47 Diet for asthmatics

We are what we eat! Diet affects health profoundly. Diet influences diseases too. An asthmatic who is careful about diet and food will be able to better control his or her asthma.

Diet can affect asthma in many ways:

- Some foods can immediately cause an attack, for example, peanuts, chilled beer, sea-food. This, fortunately, is rare.
- Some foods promote allergy, for example, fried food, preservatives, food colours, chinese food. This is relatively common.
- Some foods cause acid reflux and cause night-time symptoms, for example, rice or curd at night, fried food and desserts.
- Diet is linked to obesity. Obesity makes asthma worse. Obesity by itself causes breathlessness.
- Some foods protect against asthma and allergy, for example, antioxidants in fruits and leafy vegetables, vitamin C, magnesium.

Foods to be almost completely avoided

- Whichever food that you have noticed consistently aggravates your symptoms
- Very cold water, cold drinks, ice and chilled beer
- Deep-fried stuff: samosa, kachori, puri
- Junk food: pizza, burgers, kurkure, chips, dal moth, etc
- Food with artificial colours or preservatives
- Very late or heavy dinner

Foods to be avoided as much as is possible

- Vegetables: Bhindi, arvi, kamal kakdi
- Daals: Rajma, man sabot, chana dal
- Desserts at night
- Things made of besan
- Chinese food
- Processed cheese
- Rice and curd at night

Foods which cause reflux and night time symptoms:

- Rice and curd at night
- Late or heavy dinner
- Dessert
- Kadhi, rajma, man sabut at night
- Deep-fried stuff

Foods that are good for asthma – the more, the better!

- Almost all fruits, except unripe banana, citrus fruits and, possibly, mango
- All green leafy vegetables for their anti-oxidants
- Tea and coffee in moderation; They are bronchodilators
- Warm water, especially with ginger and honey
- Clear soups, vitamin C, onions

48 It is not necessary that doctors know everything!

Recently, an asthma patient wrote me a very long letter. I have never seen this patient. From his style of writing, I presume he is from Afghanistan.

He writes that he has asthma for many years and has seen many doctors. All the doctors tell him that it cannot be cured. Then he goes on to say, "But it is not necessary that doctors know everything." I agree!

So he tried many natural remedies and his asthma is now much better. From his own experience, he suggests the following.

I'm reproducing, verbatim and without any comment, what he wrote.

- Had a firm belief that I will definitely get cured.
- 1 full teaspoon honey + ½ teaspoon kalonji oil in 1 cup hot water before having anything in the morning and before sleeping.
- Take your dinner at least 2 hours before sleeping.
- Eat less. (It's a sunnah, and cure for many diseases)
- Sleep well in the night, don't sleep in daytime. Remember the nursery poem "Early to bed, early to rise, make a man (woman also) healthy, wealthy and wise."
- Eat light food, without red pepper, without oil, with too much munching, eat slowly and less than your hunger. (it's a sunnah, and cure for many diseases)
- Don't drink water immediately after having your meal;

instead drink it in between. (it's a sunnah, and cure for many diseases)

- At least 8 – 10 glass of water every day and 1 cup hot water in every 2 hours.
- A little bit of exercise every day. (It's a sunnah, and cure for many diseases)
- Try to stay away from dust, pollution and smells.
- Don't put your mind under pressure. (It's a sunnah, and cure for many diseases)
- 1 fast every week. (It's a sunnah, and cure for many diseases)
- Sleep on high cushion.
- Honey + haldi
- Haldi (turmeric powder) + milk when you are hungry.
- 3 – 4 dry figs.
- Lemon juice + 1 teaspoon ginger juice
- Milk + few garlic + heat then cool
- 3 teaspoon water + 6 cloves + Heat then Cool + Honey
- Proper ventilation in room, sunlight must. Try to live in a dry and hot city.
- Have plenty of fresh fruits, green vegetables, orange, berries, dry date, cucumber, tomatoes, carrot, salad, apples, grapes, soyabean, peanuts, spinach, peas.
- Stop having (or try to avoid): red pepper, oil, egg, cold water, milk products, ice cream, cold drinks, cigarette, anger, tension, aspirin, brufen, banana, rice, papaya, tomato ketchups, bread, chips, soup, butter, rajmah, melon, watermelon, salt, cabbage, cauliflower, pickles, meat, mint, onion, going out in cold without proper clothes.

49 Empowering patients

There is an old Chinese saying: “Give a man a fish and you feed him for one day. Teach him how to fish and you feed him for a lifetime.”

From time immemorial, the practice of medicine has been a closely guarded secret. The physician is the know-all and the patient is the 'ignorant recipient' who was expected to blindly follow the orders. The medicinal concoctions were a secret. The prescriptions were in Greek or Latin.

I strongly feel that being a doctor-patient team and enabling patients is a better method of caring, curing and healing.

I deal with asthma. Asthma is a chronic disease that will stay with the patient. It can be controlled but it cannot be cured.

In chronic diseases, if a good outcome is desired, the doctor and the patient have to work as a team. The role of the doctor is more about teaching and less about doctoring. It is about empowering and enabling the patient to manage the disease himself or herself. Power must lie in the hands of the patient!!

Enabling patients does not make the doctor weaker. In fact, he or she becomes stronger

Can all patients be enabled and empowered? Do all patients want to be empowered? Can all patients even comprehend the concept of empowerment? The answer is NO. Not all.

Some patients shy away from taking this responsibility. They like the doctor to hold their hand and lead the way. They do not want to be, or find themselves incapable of being, a part of the decision-making process. Some may even think that the doctor is unsure or incompetent to be asking and wanting to know the

patient's preference.

I had a previous patient of mine bring her old mother from the village to consult me about her medical problem. On my asking her, "*Mataji*, what is your problem?" her response was, "that is for you to find out." And the look said it all: "You said he is a good doctor, but he seems to be an idiot. He's asking me what the problem is."

Patients who claim they want to be empowered also become shaky when it comes to the crunch. I remember reading a very interesting study from the Mayo Clinic. They asked 100 healthy women in the age group of 50 – 60 years that if they were to be diagnosed with breast cancer, would they like the treatment modality (surgery, radiotherapy or chemotherapy) to be explained to them and then they themselves will decide what they want, or would they like the doctor to decide what is best for them. As expected, a majority said that they would like to decide for themselves. Another 100 recently diagnosed breast cancer patients were also posed the same question. Surprisingly, when the cancer was actually there, a majority of the women wanted the doctor to be the one to take this final call.

So, even though, notionally, the concept of self-empowerment is attractive, when push comes to shove, many patients may still entrust this responsibility to the doctor.

No two patients think alike. So, a doctor's job is not only to diagnose the patient's ailment but also diagnose how much to empower the patient. Herein lies the art and joy of medicine!

50 The winner approach

I see so many asthma patients. Some have so much trouble controlling their asthma. They have symptoms most of the time and attacks sometimes. Their asthma dominates their lives.

There are others who are winners. Their asthma is well controlled, they have practically no symptoms, and they lead an absolutely normal life. This is largely because they have a winner's approach to asthma self-management.

What is it that differentiates the winners from the whiners?

Based on my experience, asthmatics who have won their war with asthma demonstrate the following traits:

1. They accept the fact that this is a long standing (probably life long) condition.
2. They don't crib or curse their luck.
3. They go about finding the reasons and solutions to the problem.
4. They don't believe in hearsay. They gather their own information, ask their doctor sensible questions, and then make up their own mind as to the kind of treatment that should be best for them.
5. They take sensible precautions.
6. They don't stop their inhalers the moment they feel slightly better.
7. They have a generally positive approach to life and are upbeat.

8. They try to establish a good relationship with their doctor! They see him or her as part of the solution rather than a part of the problem.

So, here is my suggestion to you readers – go over the list again slowly, and work on the areas you feel you could do better.

Best wishes towards BECOMING A WINNER!

51 Safe travel tips for asthmatics

Everyone loves to travel and see new places! Asthmatics are no different. Unfortunately, travelling and visiting new places poses certain risks and problems. But with proper care and attention to detail, asthmatics can safely travel and enjoy without asthma playing spoil-sport!

What are the risks that asthmatics may face during travel for asthmatics?

- Weather and temperature changes can precipitate asthma.
- A new place might have high pollen counts.
- Hotel rooms can have high dust mite concentration and fungal spores in the carpeting.
- Eating out during vacations can cause food allergy or flare-up of asthma.
- One tends to become careless about medications when on a holiday!

So what should one be careful about when travelling? Lets divide this into three parts:

❶ Planning before travel

❷ Precautions during travel

❸ Precautions at the destination

Planning before travel

- Meet your asthma doctor. Discuss whether your asthma is optimally controlled. Take the prescribed medicines regularly.
- Carry a written asthma plan devised by your doctor.
- Carry your doctor's contact number and permission to call if required!

Precautions during travel

- Air travel needs certain special precautions. The air in the aircrafts is very dry so drink plenty of water. Nasal decongestants before a flight may be required
- The cabin of an aircraft is decompressed. Effectively, the oxygen concentration in the plane is that which is there at an altitude of 8,000 feet (for example, as in Nainital). Some amount of difficulty in breathing is expected.
- Carry your medicines in your hand baggage so that the chances of losing them are minimized. Carry extra quantities.
- Keep the prescriptions along with the medicines. Some countries are very fussy about this in terms of either drug or security concerns.
- When travelling by car, keep the windows rolled up to minimize pollen exposure.

- If your asthma is severe or uncontrolled, you may need to carry a nebulizer or a spacer-inhaler combination for emergency use.

Precautions at the destination

- Select the hotel room carefully – it should have a hard floor (not carpeted) and it should be sunny and airy.
- If you are allergic to certain food items be very careful. Mention that to the hotel and kitchen management, because inadvertent contamination in the kitchen is very common. Read food labels carefully.
- Scuba diving is very unsafe for asthmatics. Don't do it. Snorkelling is okay.
- Regularity of medication is necessary.

So, to use a phrase that liquor companies use: "ENJOY BUT ENJOY SENSIBLY." Bon voyage and safe travel!

52 An open letter to parents of children with asthma

Parents of asthmatic children worry a lot. They worry about the fact that their child has to take medicines every day. They worry about the side effects of medicines. They worry when the child has symptoms and misses school, and they fear acute attacks. They worry when they read in the newspapers that asthmatic children can die of an attack of asthma. It's not only about a disease but also about emotions.

Actually, they need not. Here is my advise to parents of children who have asthma.

- **Accept**

  Parents don't like to be told that their child has asthma. Doctors also know this. So they couch the diagnosis in nicer-sounding words such as 'allergy' or 'bronchitis' or 'chest congestion'. This only delays proper treatment. So my sincere advise is to accept the diagnosis and then start looking for practical and doable solutions.

- **Attitude**

  Have you noticed how the parents' attitude and feelings are imbibed by the children? If the mother is constantly critical of the maid, the child also starts saying, "Ayah is bad." Or if the father say "Oh my poor baby, you have to wear spectacles at such a young age," the child also resents wearing glasses rather than feeling happy about the fact that he or she can now see clearly with them!

  The same is the case with asthma, asthma medications and

particularly with inhalers. If the parent's constant refrain is “When will be able to stop these inhalers? – the child will also view them negatively. If, on the other hand, the parent shows gratitude and happiness over the fact that there is a device that is so easy to use and really helps the child to breathe normally, the same positive feelings will be imbibed by the child.

- **Realistic Expectations**

  Some children do outgrow their asthma. Some don’t. It is largely determined by the genes over which we don’t have control. Yes, environmental control and diet regulation helps. If the child is to outgrow asthma, it would happen over years and not in days, weeks or months.

  With proper medications, the asthmatic child is usually well controlled to the extent that there are no ongoing symptoms or limitations of activities. However, with a change of season or with a virus infection, some symptoms will appear. This is not unexpected. A slight increase in medications will usually bring things back under normal control.

- **Alternative systems**

  Alternative systems such as yoga, homeopathy, ayurveda and naturopathy do have something to offer to help asthmatics. They don’t help all patients. They don’t help all patients equally. If you have faith, you could try them. But my advise would be to not to stop the normal treatment suddenly.

- **Care yes, pampering no**

  Mothers sometimes try to over-compensate the asthmatic child by over pampering him or her. This never helps. In fact, it creates further difficulties in that the child starts using the asthma, sometimes sub-consciously, to get his or her way.

- **Encourage sports**

  The asthmatic child gets out of breath easily and, thus, is usually never really 'into sports'. But with proper control of asthma, the child can and should have a normal life, including participation in sports. This should be encouraged. It is very good for the child's self-esteem. Sports involving spurts of activity are usually better tolerated than prolonged exertion such as long-distance running. Swimming is usually good.

- **Partnership with the doctor**

  Sometimes, the anger or frustration, related to the diagnosis of asthma is misdirected towards the doctor. But really, the doctor is part of the solution rather than a part of the problem. Be friends with the doctor. Trust him.That way, the doctor will be able to to help your child better.

53 Location, location, location

Asthma, diabetes and high blood pressure are three common diseases that share many similarities. None is curable. All are controllable. All require the patient to make lifestyle modifications and take medication regularly. There is, however, an interesting difference. Diabetes and blood pressure are not affected by the patient's place of residence. They will behave or misbehave in the same way whether the patient is in New Delhi, New York or Timbuktu!

Asthma, on the other hand, is influenced by location. It can become better or worse depending on where the patient is living.

In this regard, I get two kinds of questions from patients:

1. "Doc, I am being posted to such and such city or country. Will my asthma become worse there?"
2. "Doc, my son has such bad asthma. Will moving to another city help?"

The following needs to be kept in mind:

- Asthma and allergy are genetic traits. When you move, you take your allergy and asthma with you.
- There are no clear cut 'good' or 'bad' cities or countries for asthma.
- Warm and damp places have more of house dust mites and fungal spores, and patients with these sensitizations will have worsening of symptoms in these places.
- Areas with a dry climate have more of certain types of pollen.

- It is worth-while to know your allergens. This is easily done by the skin prick test. Your allergy specialist can guide you, based on your sensitizations.

- Before making the final or irrevocable decision about moving, it may be a good idea to do some 'testing'. Renting an apartment and living in the new city for some time to see how the asthma is behaving is a simple and sensible thing to do.

India is on the move! People are travelling. Changing cities, or even countries, for professional advancement, is very common. Children will also have to move with their parents. If the child has asthma, this change affects him or her more profoundly. Besides the change in the allergen environment, there are other stresses that come into play. Going to a new school, leaving old friends and trying to make new ones, or bullying by school mates are real stressors for kids. And stress does make asthma worse.

Sometimes, moving into a dusty house that has been locked for a long time, can lead to an attack of asthma. The smell of paint or polish, similarly, can prove dangerous for asthmatics. Beware of these triggers.

Before moving to a new place, it would be a good idea to discuss the following with your doctor:

- What are the allergens in the new location and what is the likelihood of the asthma becoming worse?

- Who are the good doctors in the new city who could take care of you?

- Does the treatment need any alteration?

- What information should be provided to the child's new school?

With proper planning on these lines, moving to a new place could become a pleasurable experience without asthma playing spoil-sport!

54 Asthma and the internet

The breadth and depth of the information on the internet is breathtaking! It is not wrong to say that the internet pervades every aspect of our life. This is especially so for the younger generation. Any information that we need or seek – whether it is about products, services or health – we turn to the internet for it. It's instantly available. And is, mostly, reliable.

People nowadays seek reliable health information. This is particularly so if they suffer from chronic conditions. Doctors, although a knowledgable source of this information, are usually hard-pressed for time. It is no surprise that the patients would turn to the internet for health info.

Just like everything else in life, this too has it's pros and cons.

The Positives

- A smart and savvy patient can very quickly look up the internet for the information that he or she is seeking.
- This info is usually very up-to-date.
- If this matches with what has been told by the doctor, it is a great relief to the patient and provides a ratification.
- Asthma requires a lot of precautions to be taken by the patient to keep things under control. All this information is easily available on the internet. Reading them repeatedly over time can re-inforce these good habits. I have found that the younger generation is more likely to follow advise from the internet more easily than that given by the parents or the doctor!

- It saves the doctor-patient time. The time that the patient has with the doctor is limited. Usually to 10 – 20 minutes. I very often give patients direct links to good websites where this kind of information is available, which they can read at leasure in their homes.

The Negative

- Cyberchondriacs: Many patients, some of whom already have a hypochondriac streak in them, become more paranoid by incessantly looking up disease and drug-related issues on the internet. Drugs have possible side effects. They are all listed on the internet. By going over this list, such patients will either worry excessively or simply stop taking the medicine – both with bad consequences.

- "Cranks": The internet is full of cranks! A crank, to me, is a person who first makes an opinion, and then goes about looking for facts to fit in his or her thesis. Examples are hearsay stories such as drinking ginger and honey cured my asthma or that mega doses of vitamin D can cure asthma. And then there are 'hoaxes' about medical matters which spread like viruses on the internet.

Here are some good websites for reliable asthma and allergy information.

- www.acac.in
- www.breathefree.com
- Mayo Clinic on asthma:

  http://www.mayoclinic.com/health/asthma/DS00021

- American Academy of Allergy and Applied Immunology: http://www.aaaai.org/conditions-and-treatments/allergies.aspx

- Allergy and Asthma Network – Mothers of Asthmatics: http://www.aanma.org/
- National Jewish Hospital asthma information: http://www.nationaljewish.org/healthinfo/conditions/asthma/

My final advise on this matter:

- Visit reliable websites. Sites ending with edu (education – usually universities or hospitals), org (organization – usually big NGOs) or gov (governmental sites) are likely to be reliable. Sites ending with .com are commercial sites.
- Be skeptical of sites offering 'CURE' for asthma or allergy. If it sounds too good to be true, it probably isn't true!
- Be skeptical of sites with too many 'testimonials' or patient stories of miracles or good results.
- Be sure to share the info with your doctor. He or she may initially be irritated or annoyed, but a good doctor will clarify things and address your views. If your doctor consistently disregards this, may be it is time to change your doctor! Remember, a good doctor is also an open-minded doctor.
- Forums are good places to learn about a condition or interest. You get to know of the views of people in the same boat as you are. But a word of caution. Drug-producing companies also know this. Forums are also fertile grounds for them to go fishing. Many seemingly independent forums are managed from the back end by interested companies. So be careful and circumspect.

55 Drugs to avoid in asthma

Drugs or medicines are powerful agents and have to be used carefully.

This is particularly true for an asthmatic.

About 5 – 10 percent of the asthmatics and up to 40 percent of the asthmatics with nasal polyps are hyper-sensitive to aspirin and other similar medicines called NSAIDs (non-steroidal anti-inflammatory drugs) such as Voveran or Brufen or Aspirin.

These drugs can cause nasal allergy, skin allergy or an asthma attack or even acute anaphylaxis and shock. This can even become life-threatening.

It is true that many asthmatics can take such medicines safely without any adverse effects. It is also true that a very small minority of asthmatics actually improve with these medicines – but this is very rare and certainly not a suggested treatment!

There are many safer alternatives to NSAIDs which the asthma patient can take for pain or fever. Paracetamol or Crocin are safe.

Another class of medicines that is unsafe in asthma is beta-antagonists that are usually prescribed as tablets for high blood pressure, heart disease and migraine and as eye-drops in glaucoma. The common names for this class of medicines are atenolol, metoprolol etc. These should be avoided.

ACE inhibitors are a type of blood pressure medicine. Some of the common names are Enalappril, Captopril, Lisinopril, etc. These are notorious for causing a dry irritating cough – both

in asthmatics and non-asthmatics. For reasons not entirely clear yet, this side effect is more commonly seen in Indians. This might create confusion as to whether the cough is due to asthma or a side effect of the medicine. Hence, it may be better to altogether avoid taking this drug and use any of the many alternatives available.

Many asthma patients take deriphyllin. Some drugs interfere with deriphylline metabolism and increase the levels of deriphylline in the blood, sometimes to dangerous levels. These are Cimetedine (Zinetac), erythromycin, ciproflox and allopurinol (Zyloric). These must be used carefully if taking deriphyllin.

So here are some general rules regarding use of other drugs in asthma:

- Take only tried and tested medicines. Don't try the latest or newest medicines.
- Don't try a new medicine at night. If, God forbid, there is a reaction, it is better it occurs in the day time when medical help is easily available.
- Always inform your doctor that you have asthma so that he or she is doubly careful in prescribing medicines.
- Always carry some anti-allergy tabs and keep them handy.

56 Winter-time tips for asthmatics

Many, but not all, asthmatics have more trouble with asthma during the winter months than at other times.

What is it about winter that causes trouble to asthmatics? Well, the reasons could be many, but the common ones are as below:

- Viral infections of the respiratory system are more common in winters. Asthmatics already have twitchy or over-sensitive air tubes and a viral infection hits them hard and makes them more congested and wheezy. Moreover, the wheezing due to viral infections (as opposed to the wheezing due to allergens) is NOT very responsive to medication.

Tip: While it is impossible to avoid viral infections completely, a lot can be done to minimize them. Frequent hand washing, especially before eating, helps. Avoid overcrowded places. Take the usual sensible precautions when near a patient who is coughing and sneezing. Keep yourself well covered. Drink plenty of warm fluids – chicken soup or ginger water and honey.

- Opening trunks and bed boxes to take out woollens, blankets and quilts often causes exposure to fungal spores and aggravates asthma.

  Tip: This job should be entrusted to some other family member. The clothes and quilts that are musty should be shown sunlight for 2-3 days before using them.

- Cold air itself can act as a physical trigger in some asthma patients. Moreover, cold air is drier and can cause osmotic changes in the air tubes to cause wheezing. This can be particularly important for people who engage in sports.

  Tips: Before going out into the cold air, one should be well covered, especially in the face and nose area. This is best achieved by using a muffler around the neck and covering the face and nose with it. Keeping the nose warm has been shown to lessen the bad effect of exercise on asthma. Breathing through the nose warms up the inhaled air. Exercise indoors when it is particularly cold and windy. Take inhalers regularly before exercise.

- Closed doors and windows, sealed tightly against the cold, prevent air circulation, leading to higher concentrations of indoor allergens. On top of that, people spend more time indoors during the winter and, therefore, more time surrounded by – and breathing in – indoor allergens.

  Winters do pose some special challenges for asthmatics but with proper knowledge as well as the resources to cope with them, asthma sufferers can effectively reduce the number of winter-related asthma attacks they may otherwise have.

57 Steroid phobia in India

Asthma controller inhalers contain a small quantity of corticosteroids The mention of the word 'steroid' makes most patients balk at the idea of using inhalers. What is it about steroids that most people are afraid of them?

I believe that “bad doctors and bad patients give steroids a bad name.”

Bad doctors, who prescribe steroids liberally or for longer than is necessary, are placing patients at risk of side effects. Side effects such as weight gain, increased appetite, increased blood sugar, and brittle bones.

And then there are bad patients who have been clearly told by their doctor to take oral steroids for, maybe 10 days only, but continue to take them for months! Naturally, there will be side effects.

This problem can be compounded when a bad doctor and a bad patient come together and misuse steroids!

Misuse of steroids can certainly lead to side effects, and anecdotes and stories of these misadventures go around and create fear in the mind of patients. So it is not uncommon to get well-meaning, but incorrect, advise such as: “My uncle took steroid tablets for a year and he developed diabetes. These are like poison. Please don’t take them.”

Casual cautionary or negative comments by pharmacists, general practitioners, relatives or other patients can also fuel this anxiety. The internet and blogs too create a fear psychosis.

The general anxiety related to oral steroids then gets translated to inhaled steroids too. This is unfortunate. Asthma inhalers have only minute quantities of steroids. Thus, they are really very safe.

These phobias or fears act as a stumbling block or a hindrance in patients taking steroid inhalers regularly. Thus, the asthma is poorly controlled and permanent damage to the lungs occurs.

The irony is that had these patients used the inhalers regularly, they would never have suffered any of the side effects that they feared.

58 Doctor-patient relationship

This chapter is not about asthma or allergy. I wanted to pen down some of my thoughts on another general, but important, topic and that is the doctor-patient relationship.

Any relationship is based on a set of certain responsibilities and expectations. the doctor-patient relationship is no different. A certain code of conduct is expected of the doctor and the patient too must realize his or her responsibilities. Relationships can be a source of great joy and satisfaction and soured relationships can cause misery and heartburn.

When a patient goes to a doctor, what is he or she looking for? First and foremost, it is competence. That is a must; but it is not enough. The patient is also looking for someone who is willing

to listen, understand the problem and offer a solution. Someone who can empathize. Who can explain things in simple language and guide as to what can be expected. Who can support the patient through the journey from being unwell to being well again. Are these expectations of the patient unreasonable? No, they are not.

The biggest grouse that patients have with doctors is that they don't listen and they don't give enough time to the patients. Data from the Mayo Clinic shows that an average doctor-patient encounter is interrupted by the doctor within 18 seconds of the patient's account of his problem. 18 seconds!! Surely a doctor can be more patient. That same study also showed that an average patient, if allowed to say what he has to say uninterrupted, finishes the story in 90 seconds. Surely, that much time can be granted.

Another grouse that patients have with doctors is that they are unfeeling and callous. Doctors are dealing, day in and day out, with problems, diseases and death. To be able to function, they have to detach themselves, to a certain extent, from negativity. But yes, doctors should not be so detached that they do not feel the pain of the patients.

How can doctors do better?

- Give more time to the patients.
- Listen to them attentively.
- Detachment is fine but have empathy for the patient.
- Put yourself in the patient's shoes to see his or her perspective.
- Be there for the patient's need. Attend to his or her needs on the phone. Two minutes of your time means a lot to the patient.
- Be encouraging and supportive.

How can patients do better?

- Doctors are always very busy; they always have more things to attend to than the time available. Respect his or her time. Don't call at odd hours for minor or non-urgent issues.
- When meeting a doctor, come prepared with the info that the doctor will require. Be concise. Don't ramble. Nothing is more irritating for the doctor than a patient who just goes on and on. It a good idea to make notes of the important things one wants to tell and ask the doctor while waiting in the waiting room. This makes the consult very effective.
- Trust the doctor. Have faith in him or her.

There are certain patients who are quite well read and well informed. That is very good. But, sometimes, they form opinions and half-baked ideas and only want the doctor to ratify them. If the doctor's professional opinion does not match their notions, they go to another doctor. The other extreme are patients who just do not want to assume any responsibility of their disease or treatment. They don't want to listen to the doctor; they never know the names of the medicines they are taking. Their constant refrain is, "Just make me okay doc."

The doctor-patient relationship has changed with time and changing social values. Earlier, it used to be very paternalistic – "The doctor knows best." or "Am I the doctor or are you?" Now, patients are well informed and want to actively participate in the decision-making process. This is a very good change. Doctors who engage with the patients, explain things and encourage patients to ask questions and are willing to take treatment decisions collectively will be more popular, more successful and their patients will follow their advise more readily.

Another change in the doctor-patient relationship that I observe is that it used to be very formal and it has now become more casual. Studies show that a vast majority of the patients want

their doctor to address them by their first name. There is a small minority of patients who do not like this informality; the majority of them are over the age of 65 years. This study also revealed that the vast majority of the patients still hesitate to call the doctor by his or her first name!

This beautiful relationship can give a lot of joy to both patients and doctors if both the parties follow some simple rules as below:

For the patient: Trust and respect the doctor.

For the doctor: Competence, honesty, always but always keeping the patient's best interest in mind, openness, give time and show empathy.

59 Alternative systems and asthma

There are acute diseases and there are chronic diseases. Acute diseases are those that come on suddenly. For instance, malaria or dengue or viral fever. Many people think that 'acute' means severe. That is not true. Acute means sudden. Viral fever is also acute, but it is a mild disease. A stroke is an acute disease that is severe and life-threatening.

Chronic diseases are those that persist. They don't come and go. They are there. Examples are diabetes, high blood pressure, Parkinsonism, asthma or allergy, to name a few common ones.

Patients with chronic diseases feel tired and frustrated with their disease. There is no cure for these diseases. They can be controlled with precautions and regular medications. But they cannot be cured. At least, that's what the mainstream medical practitioners say. This is what frustrates these patients. They are tired of curtailing their lifestyle and taking medicines every day. And they worry about the side effects of medicines. They wish there could be a one-time cure for their disease.

So they look for alternatives. They look for systems of medicine that will say, "Yes, come to us and we can get rid of this disease and cure you." Aha, a ray of hope! Light after the darkness of a tunnel! Let's give it a try, even if it seems it is unlikely to happen. Even if it's a waste of some money."

It is this line of thinking that drives patients with chronic diseases to try alternative medicines.

Asthma is also a chronic disease. Children with asthma sometimes outgrow it. This will happen in 30 – 50 percent of the

childhood asthmatics. That's a fairly large proportion of patients. The chances of this are brighter if one avoids the allergens. Modern medical practitioners will say, "Do the avoidance and let's hope for the best." Alternative system practitioners will say, "I can cure you." Their predictions will come true in some. So, effectively, they have cured at least some of their patients!

I'm not a total disbeliever. Every system has something to offer. Sometimes, faith in the system or in the practitioner also helps.

It's my experience that at least 80 percent of asthma patients have tried, at one time or another, alternatives such as yoga, homeopathy, ayurveda, acupuncture or acupressure for their ailment – with mixed results.

So, if you have faith in a particular alternative system, try it. But do not stop the usual asthma medications. Discuss with your

doctor openly that you are doing this. Try to be on the same page.

Doctors would also do well to be more open to alternative therapies.

More than 70 years ago, in his book- *"Diet and Diet Reforms"*, Mahatma Gandhi had written the following "Why can't practitioners of modern medicine and homeopaths work together for the benefit of patients? The trouble with homeopaths is that they make tall claims without proof and the trouble with modern doctors is that they are haughty and think it is only their system which works."

That, I think, pretty much sums it up.

60 Home remedies for asthma

Simple home remedies for diseases are very popular among patients with chronic diseases. But do they work? Well, the answer is, “It depends on the disease.” They will work very little, if at all, for diseases such as malaria or pneumonia. For other diseases such as diabetes and joint problems, home remedies work quite well.

What about asthma?

Home remedies are certainly useful in asthma. That is not to say that they can substitute inhalers. Inhalers should not be stopped without asking your doctor. But a lot can be gained by following these simple, time-tested remedies.

Certain simple food items are helpful in asthma. These are easily available in any household or kitchen. Practical experience tells us that the following are helpful:

Ginger: Having a mixture of ginger, pomegranate juice and honey in the morning helps in clearing the phlegm. Ginger tea is also beneficial.

Honey: Honey helps in reducing the cough in asthma. It could be mixed with cinnamon powder or mixed with warm water and drunk.

Mustard oil: Mildly mustard oil, sometimes mixed with a little camphor, can be applied over the chest. This is particularly good for younger children.

Figs: Three figs, soaked in water overnight, can be had in the morning. The water can also be drunk.

Garlic: One or two cloves per day of garlic are advisable for asthma patients.

Coffee: Coffee and tea are good for asthma patients. Both have good bronchodilator properties and also clear the congestion.

Eucalyptus oil: Helps in clearing nasal congestion.

Inhaling clean fresh air, having a generally healthy diet, avoiding junk food and exercising (particularly swimming) are some of the other simple things that can help asthma patients.

During an aggravation of asthma, before medical help is sought, certain simple home remedies can lessen the attack. These are as below:

- Don't panic. Remain calm.
- Sit in an upright position, slightly bent forwards and with the shoulders hunched.
- Drink warm fluids. Clear soup, tea or coffee or even warm water.
- Breathe slowly and deeply rather than take shallow and fast breaths.
- Take a dose of your quick relief inhaler, as advised by your asthma doctor.
- Seek medical help.

61 Does yoga help in asthma?

Yes, it does. Somewhat.

What yoga can do:

- It instills a sense of discipline.
- It increases the awareness of breathing and breath control.
- It trains those respiratory muscles that we don't ordinarily use for breathing.
- It helps the asthmatic to learn about diaphragmatic breathing.
- So, when there is breathing difficulty, these muscles come to your rescue.
- It generally strengthens the respiratory muscles and thus aid breathing.
- The discomfort associated with the breathing difficulty of asthma is felt lesser.
- Yoga helps the body to become fitter and leaner. This makes breathing easier.

So what I am saying is that yoga is a very special exercise that makes breathing better and easier. An asthmatic who does regular yoga feels his or her breathing to have become better and easier.

What yoga cannot do?

- It cannot reduce the atopy, that is, the tendency to have allergy.

- It cannot reduce the airway hypersensitivity.
- It cannot open up the constricted air tubes.
- It cannot cure asthma.

So what should be done?

- Each system of medicine or therapy has its own strengths and weaknesses.
- None has a monopoly. So my advise would be take help from wherever you can get it.
- Use them complementarily. Have realistic expectations.

Yogic practices particularly useful in asthma are:

- *Anuloma-vilom*
- *Bhastrika*
- *Kapal-bhati*
- *Bhramari*
- *Shitali*
- *Taadasana*
- *Surya namaskar*

These can be learnt from a knowledgeable yoga teacher or a reputed institution. Do yoga and pranayama regularly. They are very good for health promotion in general. But do not discontinue your medication. If yoga does some good to your asthma, then your medication dose may come down.

62 Homeopathy for asthma

Allopathy or the modern medicine system believes that asthma cannot be cured by any medicine. However, it can be completely controlled.

Homeopathy claims that it can actually cure asthma. How true is this claim, is hard to say. A significant percentage of children spontaneously get cured with age. It may be that these are the ones where homeopathy unfairly claims credit. Be that as it may, asthma patients are certainly attracted towards homeopathy, and it's tall claims.

Asthma patients can certainly try homeopathy. My sincere suggestion is that they should not abruptly stop their usual inhalers. If some relief is there, they can be reduced gradually.

Homeopathy is a system of medicine that tries to 'cure' this disease instead of trying to provide symptomatic relief. Of special interest to a homeopath is the history of suppression of skin disease. Homeopaths believe that when there is a tendency or predisposition for a disease – it first manifests on the less vital organs, towards the periphery (like the skin). If this manifestation is suppressed, than the disease shifts inwards, towards the more vital organs (like lungs or heart)

Childhood asthma is often preceded by eczema. Children often 'move-out' of eczema and 'move-into' asthma. Homeopaths believe that the suppression of eczema with topical preparations, does not cure the disease of the person, but merely drives it inwards.

It is often observed by homeopaths that when a right medicine is given, the asthma disappears but the old eczema or skin rash

(if it was there originally) reappears for some time, before finally disappearing itself. This reappearance of old symptoms is seen as a reversal of the disease process and is considered a very good prognostic sign by homeopaths.

- **Medicines**

  There are lots of medicines in homeopathy for asthma symptoms and it is not possible to list them all here. Some of the common medicines are: ipecac, lachesis, sulphur, ignatia, hepa-sulph, nat-sulph, tuberculinum, etc. The selection of medicine varies from patient to patient.

  Most homeopaths use good medicines and these are generally safe. There have been instances where unscrupulous practitioners have mixed steroids in the homeopathy pills. This can be tested easily. So, one must be careful.

63 Naturopathy for asthma

Many thousands of years ago, when there were no medicines of any kind, wise people from all civilizations of the world observed certain things about health and disease. Two observations stand out most prominently:

1. If one lives against the laws of nature, one will eventually fall sick.
2. Nature and the human body have a tremendous capacity to self-heal.

Let's understand these two concepts a bit deeper.

The primary cause of all diseases, according to nature cure, is conscious or unconscious violation of nature's laws. This violation may be in thinking, breathing, eating, drinking, working, resting as well as in moral, social and sexual conduct.

According to this philosophy, it is not the germs that initiate the problem. The soil has to be bad to allow the germs to flourish.

Also, whether it is a boil or diarrhoea or phlegm, it is simply the body's natural mechanism to get rid of the toxins. Simply suppressing the symptom usually leads to more serious disease.

The human body has a tremendous capacity to self-heal. Not all headaches and diarrhoeas or coughs need a medication. They can go away on their own or with a little help from physical methods such as rest, fasting, steam inhalation or heat fomentation. Fevers can be brought down by cold water therapy.

These, then, are the two guiding principles of naturopathy.

There is no doubt that naturopathy helps in asthma. But the path is not easy to do and to sustain. Somebody who is diligent and patient would certainly gain.

The various methods used in naturopathy to help asthma patients are as follows:

1. Diet: Naturopathy divides all foods into acidic and alkaline. All fruits, vegetables and milk are considered alkaline. Meat, eggs and cereals are considered acidic. A predominantly alkaline diet is considered good for an asthmatic.

   Furthermore, phlegm-producing foods such as ghee, banana and rice are not recommended.

2. Fasting: Naturopathy lays a lot of stress on fasting to clean the bowels of toxins.

3. Use of water: Plenty of hot fluids are recommended to keep the body hydrated. Steam baths for the upper body, alternating hot and cold baths, wrapping the chest area with hot water and blankets – all have been employed. *Jal neti* and *dhauti* are special kriyas to cleanse the nasal passages and sinuses. Many chronic sinusitis patients report a great deal of improvement with these.

Many naturopathy retreats have opened up nowadays and are popular with patients. Especially rich patients. The methods employed are good. The difficult part is for the patient to continue with them when he or she is struggling with so many other things in life!

64 Faith and asthma

We live in a cynical age and world... We would much rather believe the negative than the positive. Fear nowadays generally wins over faith.

Recently, I saw an asthma patient whom I had seen earlier too about a year ago. This is her account as she told me:

“Doc, I had visited your clinic a year ago and you had done some tests and diagnosed that I had asthma. You had asked me to take some inhaler and with that I had improved. A few days ago, I had gone to my local doctor for a fever and he saw your prescriptions. He told me that these are steroids and I must immediately stop these. I got scared and stopped them. Slowly, my symptoms of breathlessness returned but I somehow tolerated that. Now, it is intolerable. I am breathless ALL the time. So I have come back to you.”

I said, “I had explained in detail to you that you have asthma and these inhalers have steroids but they are safe. Then why did you stop them? That means you did not have faith in me.”

Her answer was, “Doc, I have the fullest faith in you. In fact I have sent many patients to you and all of them are better. BUT I WAS SCARED.”

Is fear such a strong negative emotion that it is intrinsically stronger than the positivity of faith?

Not necessarily so! Many patients say that they feel better “just by meeting their doctor.” This effect is purely trust and faith-based. There is an example of an asthma patient who went to a doctor with a lot of faith for his treatment. This was a government hospital. Doctors have very little time here. A prescription was

given to him with the instruction to have them three times in a day for 7 days. He went away. After a week, he came back to the same doctor. The patient was very grateful and was saying that he's better. The doctor did NOT find him better. The doctor wanted to see the prescription. The patient said, "I have eaten it." This illiterate patient thought that the paper had to be torn into 21 pieces and eaten three times a day for 7 days – and that's what he did! And he was feeling better!

This is the power of faith!

Dr. Vikram Jaggi is the Medical Director of the Asthma, Chest and Allergy Centres. These are premier institutes, located in New Delhi and Gurgaon, dealing with the diagnosis and treatment of asthma and allergy. He is an alumnus and a double gold medallist from Delhi's Maulana Azad Medical College. He is passionate about patient education and spreading awareness about asthma.

He regularly contributes articles to national dailies such as the Hindustan Times, The Times of India and the like, and has contributed over 25 such articles.

He has authored over 15 books/booklets on asthma and allergy. He has taken over 70 lectures and chaired over 20 sessions, both nationally and internationally, on various topics about asthma and allergy. Since 2007, he has actively managed a website www.acac.in which is a rich source of helpful information for asthma patients.

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