






My friend Ole Svenson, who grew up in Overshoe, Minnesota says: “When I was a child I had asthma so bad I was afraid I’d live.”

# Allergen Sources

<h2 style="text-align: center;">The food you eat</h2> <ul style="list-style-type: none"><li><b>Dairy</b></li><li><b>Egg</b></li><li><b>Peanut</b></li><li><b>Seafood</b></li><li><b>Shellfish</b></li><li><b>Soy</b></li><li><b>Tree nuts</b></li><li><b>Wheat</b></li></ul>   	<h2 style="text-align: center;">The air you breathe</h2> <ul style="list-style-type: none"><li><b>Air pollution</b></li><li><b>Chemical fumes</b></li><li><b>Dust mites</b></li><li><b>Mold spores</b></li><li><b>Particulate matter</b></li><li><b>Pet dander</b></li><li><b>Pollen</b></li><li><b>Tobacco smoke</b></li></ul>  
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I was reminded of Ole a few years back at a ski resort medical conference when another doctor/speaker took the podium and displayed a full bag of asthma medicines that he rather proudly stated were his only link with life and without which he would surely die. He claimed to have spent much of his youth in an iron lung and still used steroids, bronchodilators, and a dozen new ones I’d never seen before, but enthusiastically known to the drug reps out in the lobby.



Wishing to be helpful after the one hour lecture, I approached the speaker to tell Ole’s story that “there were a couple of weeks in August 1942



when I should have been in an iron lung too, except that Overshoe’s only lung was used by a kid with polio.” But by going vegan and learning a few environmental tricks, Ole solved all his problems and

is now healthy and drug free. However, the professor seemed incensed and would hear none of it, leaving shortly clutching his bag of medicines.

So for the benefit of others who are not pleased by recurrent illness and multi-thousand dollar medical, drug, and hospital bills, here is an alternate view:

The universe is made of stuff. You're made out of the same stuff. Nobody really knows what stuff is, although we give its tiniest fragments names like quark, electron, proton, molecule, etc. and write equations that are pretty accurate in predicting what big clumps of stuff will do and how they got to be clumps, and we write more confusing probability equations about what the tiny stuff did, does, and may do.

Your body is very interested in the difference between your stuff, and the stuff around you because it knows a lot of that stuff is up to no good. Your nervous system avoids the big stuff e.g. sabre tooth tigers, colliding buses, poison ivy, former spouses, etc., but there's another outfit in charge of little stuff.

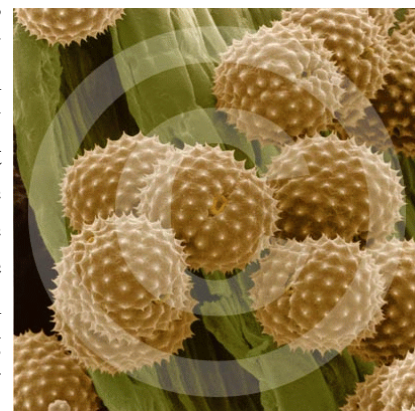
This is the stuff sniffing department that the erudite call the immune system. It matches the patterns in your little stuff against environmental stuff, for the most part comparing proteins to see if the sequence of amino acids in *your* stuff should tolerate the presence of the outside stuff *inside* your stuff. If the answer is no, then several battalions of white cells, IgE, mast cells, histamine, etc. will spring into action and in the ensuing fracas, your life becomes miserable. But you knew all that, and it's irrelevant anyway if all you're going to do is reach for a pill. The adaptive mechanism lies in getting away from the *stuff!*

Environmental allergens fall into two categories that you can control: food-borne and air-borne. Yes, food is environmental because the inside of the GI tract is outside the body for the same reason that the hole in the donut is outside the donut. In those unfortunates who have food allergies some of the stuff leaks inside the donut before it has been fully broken down by the digestive enzymes that hang out in the hole, and then the stuff sniffers inside go wild, because some of the new stuff is *not* like your stuff.

According to [www.mayoclinic.com/health/food-allergies/AA00057](http://www.mayoclinic.com/health/food-allergies/AA00057) the commonest food allergens are eggs, fish, milk, peanuts, shellfish, soy, tree nuts, and wheat. You can see at a glance that just going vegan got rid of half of Ole's potential allergens and was further *adaptive* by eliminating the numerous risks associated with animal food. Then it turned out that he wasn't allergic to peanuts, tree nuts, or soy, leaving only maybe wheat.

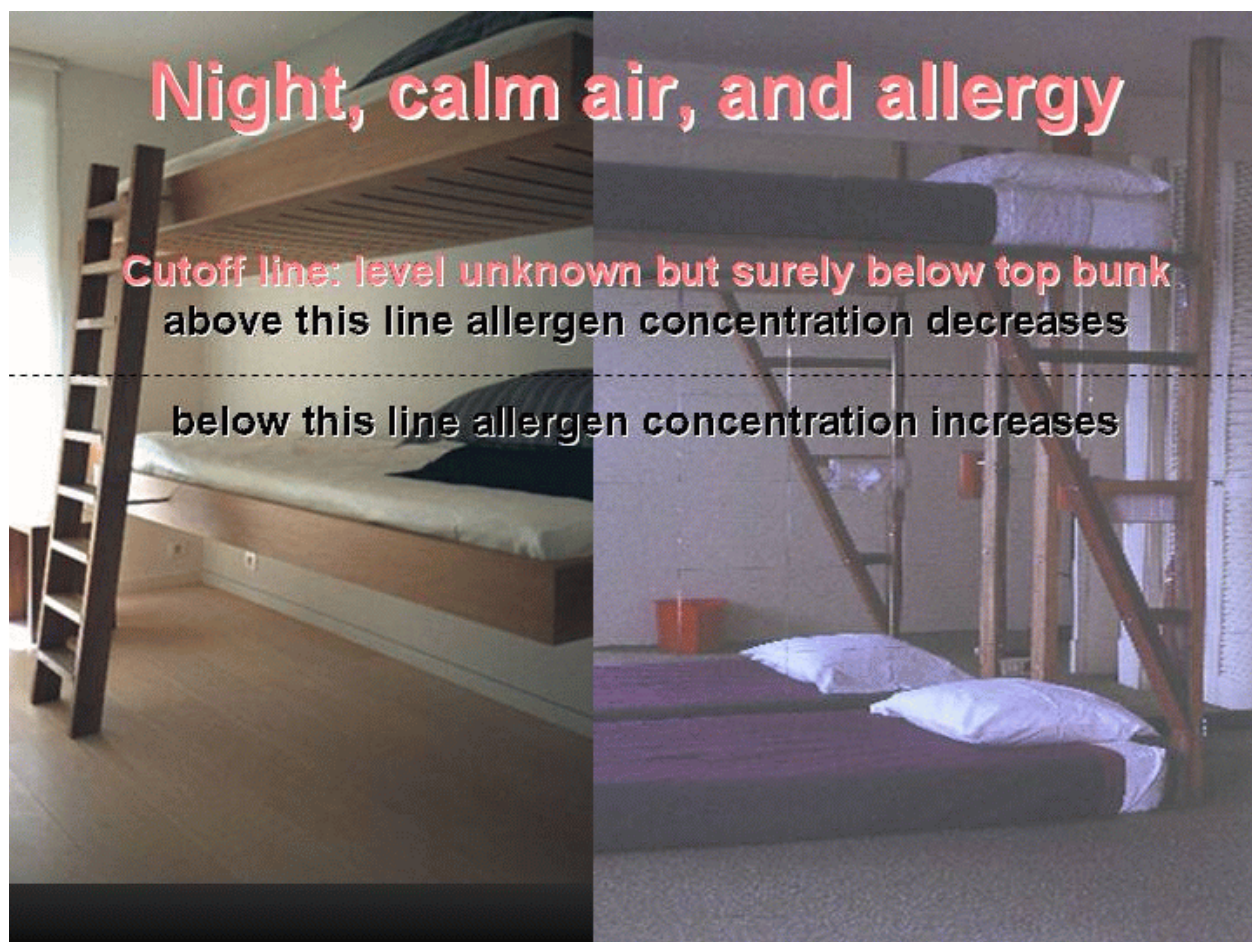
In that two weeks of status asthmaticus in 1942, breathing off the top of his inspiratory capacity, it was ragweed pollen that Ole's stuff sniffers didn't like, (maybe just because it looks so gnarly). But Ole decided around the age of 20 that the sniffers hadn't really been telling him to take pills and a nebulizer, but to stop eating all animal foods, especially the milk, and to move into the top floor of a high rise, get an air conditioner with a HEPA (high efficiency particulate air) filter, and sleep in the top of double bunk bed. So that's what he did. It worked, it *might* work for you too, and here's why:

Airborne stuff settles at night. During the day when air currents and Brownian motion keep it suspended, there's no getting away from it, but later, when not even a mouse is stirring, it comes on down, settles on your rug, and if you don't believe it, just empty your vacuum cleaner bag. For the truly skeptical put a flashlight on the rug in a dark room, pat the rug, and watch some stuff come up into the air again. Better yet, sleep on the floor and observe your allergies in the morning. Then borrow somebody's double bunk bed for a few nights and see if your allergies get better. In Ole's experience if you can just get away from that stuff during the 7-8 hours every night when you're asleep, you'll eventually become anergic (no longer allergic), but the best way to do it is to



Ragweed Pollen

go vegan and regard your bedroom as your sanctum sanctorum keeping insects, pets, kids, and all but your spouse out of it. After that, you have to build something like this, a really high double bunk bed.



Disclaimer: if you decide to build a tall one, make sure it's structurally sound and has railings, unlike the ones above.



Ideally the HEPA filter should be mounted high in the room over an A/C outlet that also draws a small amount of outside air so that as clean air comes into the upper room, dirty air gets pushed out under the doorsill. In this way the room gets cleaner by the day.

Critics will say that this is a simplistic approach to a complex issue. Indeed, the table of contents of the *11/09 Journal of Allergy and Clinical Immunology* has 32 articles, but not a single one on allergen avoidance. One is expected instead to divvy up several hundred dollars on RAST (radioallergosorbent test) or ELISA (Enzyme-linked immunosorbent assay) or at the very least a skin test, to find out what you're allergic to. Then if you're really serious about finding out what and how much of it is in the air you should get an EPAM-5000 - Environmental Particulate Air Monitor with HazComm Software for \$4,095.00 .

My response is that none of this matters. The adaptive value of allergy is in learning not to eat or breathe the stuff that your stuff sniffers don't like. Pretty much that means eat whole-food vegan and breathe high in your personalized atmosphere, which would be good for everyone else too, since bad food and dirty air are not healthy even for the non-allergic, although they may not be lucky enough to get frequent allergic reminders.

Asthma and allergies affect one out of four Americans (60 million) nosing out Alzheimer's, Cancer, CHD, Diabetes, Parkinson's, and Stroke all combined, and rack up an economic cost of nearly \$7 billion yearly [www.aafa.org/](http://www.aafa.org/) . Not all asthma is allergic, some variants being exercise-induced and cold-induced, but its price tag is ~ 4000 fatalities/year <http://en.wikipedia.org/wiki/Asthma>


## A few additional comments on asthma.

Little Ole breathed desperately for those two weeks in '42, because when the ragweed hit, his bronchioles became inflamed, and their smooth muscle went into spasm constricting the diameters as part of a dismal scheme to keep pollen out of his terminal air sacs (alveoli) where it could directly affect gas exchange. Air could still get sucked in when he took a breath, but it couldn't get out because the increased pressure in his expiring pleural cavity collapsed the bronchioles still more, causing Ole to whistle like the calliope on a Mississippi steam boat. But people tend to grow out of asthma as they get older because of Poiseuille's law [http://en.wikipedia.org/wiki/Airway\\_resistance](http://en.wikipedia.org/wiki/Airway_resistance) which states that flow of air through a tube is a fourth power function of tube diameter. A little calculus shows that a .1 mm constriction in little Ole's 1 mm bronchioles<sup>1</sup> would reduce airflow by ~ 66% while the same .1 mm constriction in grown-up Ole's 2 mm bronchioles would only drop flow by ~ 23%, and in a 3 mm bronchiole only 13%. (Beyond this simplified math, it gets very complicated because the bronchial tree *tapers*.)

Now bronchial smooth muscle is standard equipment in mammals, and yet not even my medical texts explain why it's there in the first place, except to cause asthma attacks in little kids. But it's likely that bronchial smooth muscle evolved to reduce the "anatomic dead space" when an animal is at rest and oxygen needs are minimal. When an emergency strikes, adrenergic hormones similar to those with which doctors treat asthma, jump in and dilate the bronchial tree, greatly increasing the dead space but reducing airflow resistance so that the now fast and deep breathing animal can exchange oxygen and carbon dioxide maximally.

# Is allergy a disease or a Darwinian adaptation?

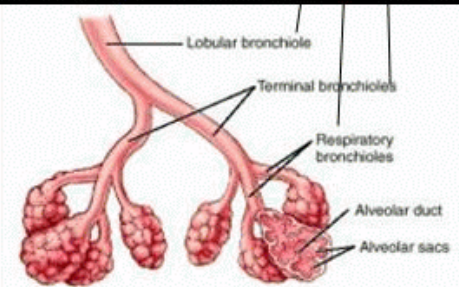
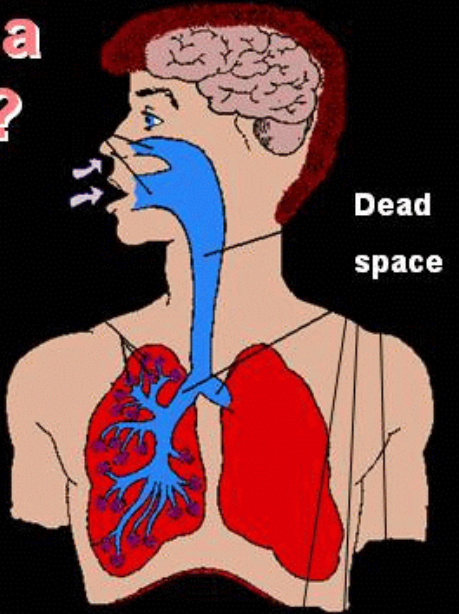
**F (Flow) ~  $k\pi R^4$**   
where:  
**R=radius of the tube**  
**k=a constant/viscosity**



**Jean Louis Poiseuille (1799 - 1869)**

**.1 mm ↓ in 1 mm tube R**  
**= ↓ flow by ~ 66%**

**.1 mm ↓ in 2 mm tube R**  
**= ↓ flow by ~ 23%**



One can give a dog asthma by putting it in a room full of sulfur dioxide (SO<sub>2</sub>) which is locally and systemically poisonous, but you won't have to put it in an iron lung because bronchoconstriction reduces the SO<sub>2</sub> being transferred into the alveoli, and tells the dog to get out, if the door is open. Humans, by contrast, stay in their bad air and take pills.

Conclusion: *Allergy is not a disease, but a misinterpreted Darwinian adaptive mechanism. Interpret it properly by learning how to avoid the allergens.*

1. Eur Respir J, 1994, 7, 596–600 Measurement of the internal size of bronchi using high resolution computed tomography (HRCT)