

# Healthy Environment

All about babies and pregnancy

# Taking care of your baby's health

## Caring for your baby begins in the mother's belly.

**A** baby's birth can cause many anxieties. The future mom usually asks herself what measures she needs to take in order to provide a healthier development for her baby. In this guide, we will show you what to do to prevent respiratory allergies from appearing in babies and pregnant women.



Genetic factors are responsible for one's predisposition to contract allergies, although environmental factors are triggers, in other words they are responsible for causing sensitivity and inflammatory reactions. In the environment we can find allergy causing substances such as mold, dust mites, pet dander, among others. These substances are known as allergens.

When inhaled, some substances can be transported through the placenta, like cigarette smoke toxins and some kinds of airborne allergens (allergens in the air). When the fetus has contact with these substances it an intrauterine sensitivity can occur, leading to an initial allergic reaction. Because of this it is important to maintain the air quality as pure as possible, at least in the places where the pregnant woman spends most of her time.



## Main Airborne Spores



**Dust mite allergens** are substances found in dust mite excrements and skeletons. Because they are so light weight, any movement can cause them in to the air. The inhalation of these substances is the main cause of allergic sensitivity in several countries.



**Mold** is a kind of fungus. Fungus throw in the air little reproductive structures named spores.



**Pet danders** are allergy causing substances and are found mostly in pet's oil glands, skin and saliva. They are small proteins that can stay in the air for hours or even days. They are also easily transported between environments, this is why they can be found in places where there are no animals. Many researches relate asthmatic crisis to the presence of pet dander in the residences living enviroment.



**Pollen** may cause a kind of rhinitis, called seasonal rhinitis, which occurs in a determined period of the year. Usually it appears during the Spring when the flowers bloom. The pollen is extremely light weighted and disperses itself through the air. When inhaled it stays in the lungs and sets off allergic reactions.

## Why should the air quality be treated?

Many researches demonstrate that airborne spores are related to allergies.

Research conducted in England verified that it is possible to reduce allergic-respiratory symptoms in babies with predisposition to asthma or allergies. The reduction of the symptoms is due to the reduction of the amount of airborne allergens that the baby is exposed to in the environment. In this way, it is clear to see that an environment containing less allergy triggering substances will help prevent the development of allergies.

Research with identical twins show that there are a few occasions when only one of them becomes asthmatic. This is one of the reasons that led the scientists to believe that the environmental factors, and not only genetics, are responsible for the development of the disease.

Another research conducted with babies under 1 year of age demonstrated that asthmatic crisis are directly related to the exposure to dust mite allergens: the more exposure there is the higher chances are of developing the disease and initiating the crisis sooner.

The discomfort caused by nighttime allergies may be so disturbing that it may interfere with the baby's sleep. Sleeping is not only important for resting but for assimilating the cerebral development, also during this period, growth hormones are released more intensely.

## Keeping a healthy environment for your baby

- If you notice the presence of mold, immediately clean the surface, disposing porous materials that have been affected.
- Sheets and blankets can be washed in hot water (131°F) every 7 days, for effective mold elimination.
- Do not use feather pillows or blankets.
- Avoid furniture that can not be cleaned easily and accumulate dust.
- Avoid carpets.
- Avoid teddy bears on the baby's bed.
- Avoid internal humidity accumulation, by leaving the windows open daily, for around 30 minutes.
- Use the high efficiency "Airfree" air purifier to keep the air quality ideal.



**Air quality is a health issue.**

### Information about Airfree<sup>®</sup> air purifier

Airfree's effectiveness is proven to reduce 99% of the microorganisms and allergens present in the air. On top of its effectiveness, Airfree presents an awarded design and a relaxing adjustable light, perfect for your baby's room.

To know more about the device and to view the tests from independent laboratories, access the website at [www.airfree.com](http://www.airfree.com)

# Airfree® Products

**Efficient:** Airfree is tested in real working environments with people circulating in them by credible ISO 17025 independent laboratories and universities in several countries. Airfree destroys any microorganism such as mold spores, bacteria, viruses, and dust mite allergens when passing through its patented high efficiency thermodynamic sterilizing system known as TSS™ technology regardless of how hazardous and small they might be.

**Faster performance:** Microorganism reduction starts in 15 minutes.

**Silent:** No sound emission.

**Exclusive:** Airfree uses just heat TSS™ technology to destroy and incinerate airborne microorganisms. No fiber glass filters, triclosan coated paper or any kind of material that can be harmful to those operating or disposing of it.

**Ozone Reduction:** Airfree exclusive TSS™ technology is the only one reducing ozone while destroying microorganisms.

**Economic:** Airfree's electric consumption is lower than a 50W light bulb. No replacement parts required like filters that may cost hundreds of dollars a year.

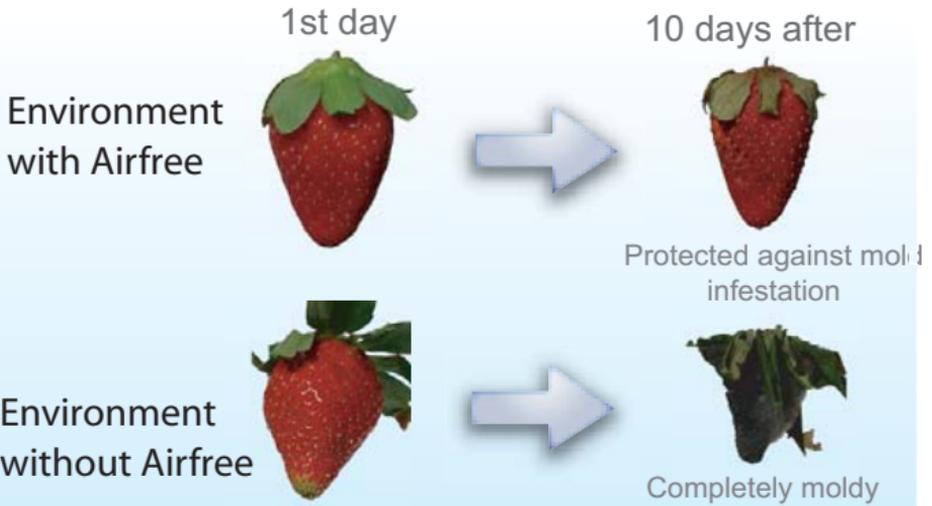
**Easy Installation:** Just place Airfree on the floor and plug it into the nearest electric outlet. No need for maintenance or special cleaning.



## Bibliographical References

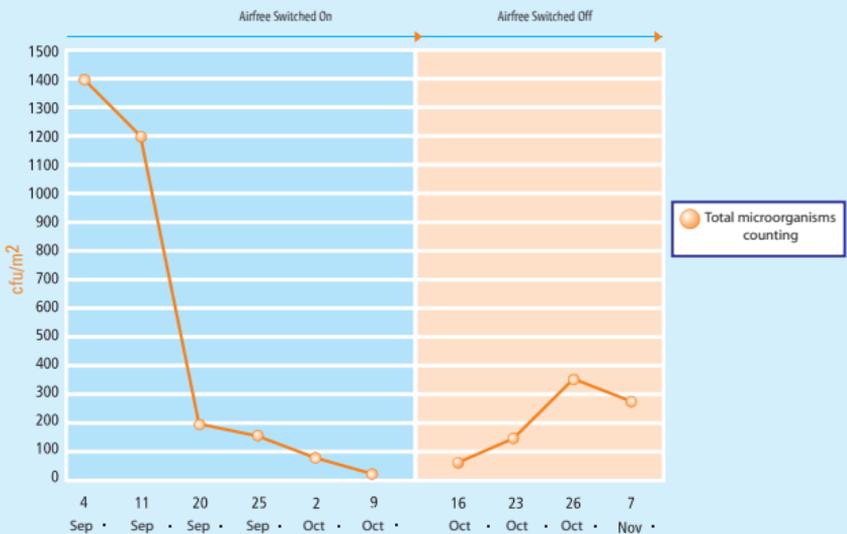
- 1- Szeffalusi Z, Loibichler C, Pichler J, Reisenberger K, Ebner C, Urbanek R. Direct evidence for transplacental allergen transfer. *Pediatr Res.* 2000 Sep;48(3):404-7.
- 2- Piccinni MP, Mecacci F, Sampognaro S, Manetti R, Parronchi P, Maggi E, Romagnani S. Aeroallergen sensitization can occur during fetal life. *Int Arch Allergy Immunol.* 1993;102(3):301-3.
- 3- Miller RL, Chew GL, Bell CA, Biedermann SA, Aggarwal M, Kinney PL, Tsai WY, Whyatt RM, Perera FP, Ford JG. Prenatal exposure, maternal sensitization, and sensitization in utero to indoor allergens in an inner-city cohort. *Am J Respir Crit Care Med.* 2001 Sep 15;164(6):995-1001.
- 4- Prescott SL, Macaubas C, Holt BJ, Smallacombe TB, Loh R, Sly PD, Holt PG. Transplacental priming of the human immune system to environmental allergens: universal skewing of initial T cell responses toward the Th2 cytokine profile. *J Immunol.* 1998 May 15;160(10):4730-7.
- 5- Custovic A, Simpson BM, Simpson A, Kissen P, Woodcock A; NAC Manchester Asthma and Allergy Study Group. Effect of environmental manipulation in pregnancy and early life on respiratory symptoms and atopy during first year of life: a randomised trial. *Lancet.* 2001 Jul 21;358(9277):188-93.
- 6- Asthma facts. Environmental Protection Agency (EPA), Indoor Environments Division. United States, may 2004.
- 7- Hospital Universitário Alzira Velano. No dia mundial de combate à asma e alergias, médicos e acadêmicos alertam sobre o perigo das doenças. <http://www.alziravelano.com.br/jornal/index1.htm>.
- 8- Marshal G.D. Internal and External Environmental Influences in Allergic Diseases. *JAOA*, Vol 104, No 5, suppl, May 2004, 1-6.
- 9- Koppelman GH, Los H, Postma DS. Genetic and environment in asthma: the answer of twin studies. *Eur Respir J.* 1999 Jan;13(1):2-4.
- 10- Sporik R, Holgate ST, Platts-Mills TA, Cogswell JJ. Exposure to house-dust mite allergen (Der p 1) and the development of asthma in childhood. A prospective study. *N Engl J Med.* 1990 Aug 23;323(8):502-7.
- 11- Holditch-Davis D. Sleeping Behaviour of Preterm Infants and Its Impact on Psychosocial Child Development. *Encyclopedia on Early Childhood Development.* Jan 7, 2004.
- 12- Richard H. K, Paul Saenger. Sleep and Growth Hormone Deficiency. *TNF lymphokines.*
- 13- Peter B. Boggs. Indoor Allergen Control Measures: A Practical Summary. Lesson 17, Volume 16. <http://www.chestnet.org/education/online/abim/chart/vol16/lesson17/print.php>.
- 14- Custovic A, Simpson A, Chapman MD, Woodcock A. Allergen avoidance in the treatment of asthma and atopic disorders. *Thorax* 1998;53:63-72.
- 15- Esteves, PC, Rosário Filho NA, Tripia SG, Caleffe LG. Prevalence of perennial and seasonal allergic rhinitis with atopic sensitization to *Dermatophagoides pteronyssinus* and *Lolium multiflorum* in schoolchildren and adults in Curitiba. *Revista Brasileira de Alergia e Imunopatologia.* 2000; 23(6):249-259.

## See the strawberries 10 day test\*:



\*test made in two separated closed chambers

### Efficiency Test: microorganism reduction



Test realized by SGS Natec - Germany - Test M00-4990  
Independent Laboratory ISO 17025

See the complete list of test reports at:  
[www.airfree.com](http://www.airfree.com)

This guide had Cristiane Minussi's collaboration, USP biologist professional responsible for the microbiological nature information.