

Everything about babies and pregnancy

Healthy
Environment

Healthier Homes

The pregnant mom and newborns

The future birth of a baby is the reason for many anxieties. The future mom usually wonders what to do to provide a healthier and safer development for her baby. In this guide, we will recommend steps to help preventing respiratory allergies from developing in newborns and their moms.



Although genetic factors are a predisposition for babies to develop allergies, environmental factors can also be a trigger causing sensitiveness and inflammatory reactions.

Some substances at home when inhaled by the future mom can cause allergies. Those allergens such as mould, dust mites, pet dander, can be transported through the placenta to the fetus. Some examples are cigarette toxins and some airborne allergens.

When the fetus gets in contact with those substances, an intrauterine sensitivity can occur, leading to an initial allergic reaction.

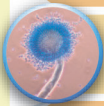
For that reason, it is important to maintain the best indoor air quality at home especially where the expecting mother stays most of her time. And please do not smoke.



Main Airborne Spores



Dust mite allergens are substances found in dust mite excrements and skeletons. Being so light weight any movement such as walking in the room will make them airborne. The inhalation of those substances is one of main causes for allergic sensitivity



Mould is one type of fungus that throws spores in the air as their reproductive structure to form new colonies



Pet dander are allergy causing substances and are found mostly in pet oil glands, skin and saliva. They are small sized proteins that can stay airborne for hours or even days. Besides, they are easily transported from one room to the other therefore they can be found in rooms where no animals are present. Many researches relate asthma symptoms to the presence of pet dander in homes.



Pollens can cause seasonal rhinitis usually appearing during spring time and, when flowers bloom. Pollens are extremely light weight and disperse in the air when inhaled stay in the lungs and trigger allergic reactions.

Why good indoor air quality is important

Many researches demonstrate that airborne spores are related to allergies. One particular research made in England concluded that it is possible to reduce allergic-respiratory symptoms in babies with predisposition to asthma or allergies by reducing the airborne allergens that baby is exposed in the environment.

It is clear that any environment containing less allergy trigger substances will inhibit the development of allergies. Researches with uni-viteline 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, and not only the genetic factors are responsible for the development of the disease. Another research realised with babies under 1 year old demonstrated that asthmatic crisis are directly related to the exposure to dust mite allergens: the higher the exposure the higher are the chances of developing the disease and initiate the crisis sooner.

The discomfort caused by nighttime allergies may be so bothering that it may interfere in baby's sleep. The sleep time is not only important for resting but also to assimilate the cerebral development, besides, during this period, the growth hormones are liberated more intensely.

Keeping a healthy environment for the baby

- If you notice the presence of mould, immediately clean the surface, disposing porous materials that have been affected;
- Sheets and blankets can be washed in hot water (55°C) every 7 days, for effective mould 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[®] air purifier

Airfree has its effectiveness proven for the reduction of up to 99% of the microorganisms and allergens present in the air. Other than 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 visualize the tests from independent laboratories, access the website: www.airfree.com

Airfree®

Efficient: Airfree is tested in real working environments with people in them by credible ISO 17025 independent laboratories and universities in several countries. Airfree destroys any microorganism such as mould spores, bacteria, viruses, and dust mite allergens when passing through its patented high efficiency thermodynamic sterilising ceramic core regardless of how hazardous and small they might be.

Silent: No sound emission.

Exclusive: Airfree uses just heat Thermodynamic 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 wasting it.

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

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

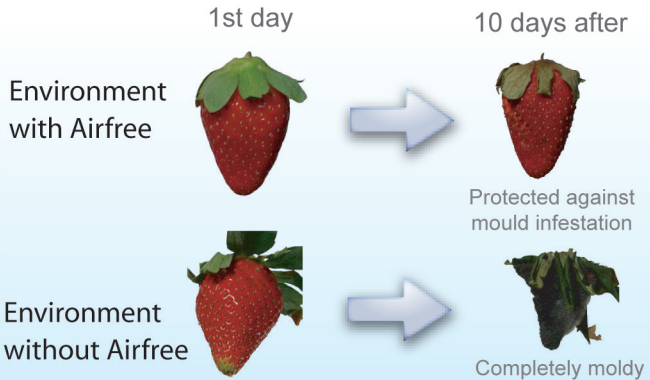
Easy Installation: Just place Airfree on the floor and plug it into the nearest electric outlet. No need for maintenance or special cleaning.



Bibliographical References

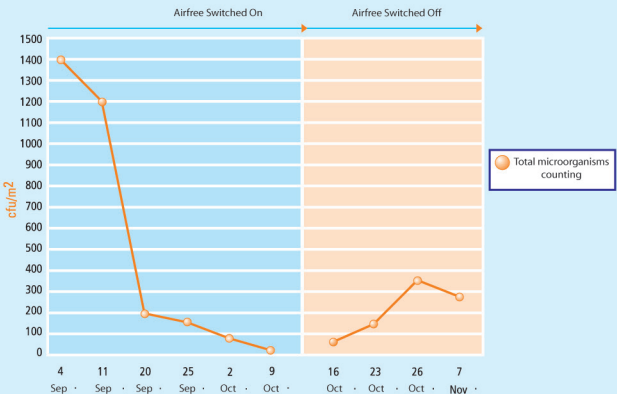
- 1- Szeffalusi Z, Loibichler C, Pichler J, Reisenberger K, Ebner C, Urbanek R. Direct evidence for transplacental allergen transfer. *Pediatr Res.* 2000 Sep;48(3):404-7.
- 2- Piccinni MP, Mecacci F, Sampognaro S, Manetti R, Parronchi P, Maggi E, Romagnani S. Aeroallergen sensitization can occur during 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 I) 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

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

