

Childhood asthma: Helping children breathe easier

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Asthma is a chronic inflammatory disease of the airways. It is one of the most common childhood illnesses. Nearly 1 out of 10 US children have asthma. The highest prevalence is in school aged children 11-17 years but the highest rates of asthma related health care visits are in preschool children 0-5 year olds. Both host factors and environmental factors come into play with the development and severity of asthma. Host factors include genetic predisposition, atrophy, airway hyper-responsiveness, gender, and race. Environmental factors include tobacco smoke, air pollution, respiratory infections, socioeconomic status, family size, diet, and obesity.

Diagnosis is based on historical, physical, and laboratory findings, including spirometry. Episodic symptoms of airflow obstruction or hyperresponsiveness: wheezing, cough, dyspnea, chest tightness. Presence of triggers such as infection, exercise, allergens, irritants, stress, or changes in weather. Possible presence of family history and social risk factors. Physical examination may reveal findings in the upper respiratory tract, chest, and skin. Spirometry showing at least partially reversible airflow obstruction.

Treatment goals are to control the chronic and nocturnal symptoms, maintain normal activity levels, and prevent acute episodes of asthma minimizing emergency room visits and hospitalizations. The guidelines for asthma management involve assessing and monitoring asthma severity, impairment, and risk. Management is based on a stepwise approach with emphasis on patient education, control of environmental factors, and co-morbid disorders. The mainstays of pharmacological treatment include reliever medications (short-acting beta-agonist, anticholinergics, systemic corticosteroids) and controllers (inhaled corticosteroids). Other controller medications include mast cell stabilizers and leukotriene modifiers. Relatively new down the pipeline are immunomodulators such as omalizumab, a monoclonal antibody against IgE, can be used in specific subset of patients who have sensitivity to relevant allergens.

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MyMy was born and raised in southern California in the heart of the Vietnamese community. She obtained her Bachelor of Science with *summa cum laude* in Molecular, Cell, and Developmental Biology at the University of California, Los Angeles. She completed her doctorate of medicine at the David Geffen School of Medicine at UCLA. After recently completing her pediatric residency at Stanford University/Lucile Packard Children's Hospital, she is now a pediatric pulmonary fellow at the Center for Excellence in Pulmonary Biology at Stanford University Medical Center. During her time as a pediatric resident, she has remained very active in the Vietnamese community in northern California. She partnered with a local community based organization to perform a child health needs assessment and contributed to community meetings and local newspaper and radio. In her fellowship, she continues her work in health education in underserved populations and researches health inequalities in outcomes and access.

Outside of work, she loves her family and friends who live in Orange County and San Francisco. She is interested in outdoor activities such as hiking, kayaking, and snorkeling. She also loves public radio, food, and travel.

