Asthma: What causes it, and what can help alleviate symptoms?

“Toxin Exposure May Cause Rise in Asthma”
“Respiratory Deaths Increase”
“Pollution Spawns Epidemic of Childhood Wheezing”

These are but some of the headlines in the news lately about one of America’s most pervasive health problems. Asthma ranks first in causing days lost from school—more than 14 million missed school days in 2008 according to the American Lung Association. Asthma saps productivity from American industry, has generated huge disability claims totaling $14 billion in lost productivity and health care costs in 2002, and ultimately sets the stage for chronic obstructive pulmonary disease (COPD). According to the latest statistics from the U.S. Environmental Protection Agency (EPA), asthma leads to two million emergency room visits and 5,000 deaths per year in the U.S. It is the fifth leading cause of death despite aggressive drug therapy aimed at taming the disease.

Asthma prevalence has been on the rise since 1980, with air pollution often is cited as a cause. Although stringent emission control standards appear to be paying off, small

particles and ozone from exhaust from cars and factories, smoke and road dust, when inhaled, can aggravate the lungs leading to coughing, chest pain and shortness of breath, all hallmarks of a full-blown asthma attack. On days when ozone air pollution is highest, ozone has been associated with 10-20 percent of all respiratory hospital visits and admissions.

Outdoor air pollution is but one of the usual suspects in this plight. There are indoor environmental asthma triggers to be dealt with as well. The energy crisis of the ’70s has engendered “tight building syndrome,” with the practical consequence that interior air quality may be up to nine times worse than outdoor air quality, even in polluted urban settings. So don’t think that retreating indoors is the answer. The proliferation of chemicalized household products, scents, wood preservatives, floor and wall treatments, carpets, rugs, drapes and synthetic-impregnated furniture adds up to a fog of irritating substances. Some studies point to a relative increase in indoor house mite infestation, a trend occurring for no particular reason other than a natural evolution reminiscent of the ways in which new viruses or drug-resistant bacteria have come into being. Other research implicates indoor natural gas from furnaces, and water heaters and stoves that generate irritating nitric oxide residues at levels which often far exceed that measured in high automobile-traffic areas.

Passive smoking, too, is a culprit, but with rates of smoking actually declining, tobacco plays only a supporting role in the spiraling epidemic of asthma. The decreasing wholesomeness of children’s diets may be germane to the trend, with ever more pervasive chemicalization and higher proportions of sugar and artificial, hydrogenated fats. In addition, the widespread use of antibiotics may be undermining children’s and adults’ immune systems. To add insult to injury, in young children, the persistent mouth breathing associated with asthma can lead to a permanent oral malformation that may last into adulthood.

This “open bite” can make biting into nourishing foods such as vegetables and fruits difficult. More bad news: A recent study suggests exposure to low levels of environmental toxins by developing fetuses and newborns may result in asthma.

Finally, there are the asthma drugs themselves. Like most drugs that only control symptoms (such as pain medications for arthritis), prescription sprays and pills for asthma provide temporary relief but do nothing to halt the progression of the disease and may actually hasten it. The medical profession itself suspects this; researchers blame the excess of asthma deaths on instability of breathing performance created by the push and pull of the initiation and withdrawal of powerful medications. The resultant pharmacological roller coaster may ultimately veer out of control, with ensuing respiratory failure and death.

A recent effort to overcome the recognized limitations of standard asthma medication has culminated in well-publicized disasters. A medication called Serevent, designed to supersede the erratic characteristics of predecessor sprays such as Proventil and Ventolin, has exhibited a disturbing tendency to be found clutched in the lifeless fingers of respiratory-arrest victims. The hapless deceased were improperly warned by their physicians that Serevent, a long-lasting spray, should not be used to provide instantaneous relief of severe wheezing. Subsequently, a U.S. safety study conducted in 2003 observed increased risk of life-threatening asthma episodes and asthma-related death in patients taking Serevent. This study prompted new labeling that issues this warning.

Asthma needs to be understood at several levels so that a multipronged strategy can be employed to reverse it. At the most mechanical level, asthma results from a constriction of smooth muscles that line the tiny airways of the lungs. Certain herbs, such as coleus forskohlii, and certain nutrients, such as magnesium, help the muscles to relax and permit the airways to open.

New research on asthma highlights the role of inflammation in perpetuating the disease. Inflammation may be caused by chronic infection, chemical exposure or allergens. Natural anti-inflammatories such as ginkgo biloba, GLA from borage oil and some herbs such as curcumin, boswellin and ashwagandha as well as antioxidants such as EGCG, glutathione and n-acetylcysteine help to put the fires out. Recent studies have correlated fish consumption with decreased respiratory disease severity, underscoring the importance of omega-3 oils.

Allergy has long been recognized as a trigger for asthma, but a false dichotomy currently partitions asthma into “extrinsic” (allergic) and “intrinsic” (non-allergic) varieties. New research indicates that much of what has been relegated to the “intrinsic” category actually is the result of subtle food, chemical, mold or internal candida allergy. Case in point: Chronic lung disease such as asthma is a red flag for a possible underlying problem with gluten, a protein found in grains such as wheat, rye, barley and oats. Research indicates that one-third of individuals with celiac disease, also known as gluten-sensitive enteropathy, have respiratory allergies such as asthma. Proper detective work can reveal the culprits. Attention to diet and environment can then minimize harmful exposures. New techniques of rapid allergy desensitization, proven successful in Europe and now adopted by a few select U.S. practitioners including the Hoffman Center, can rapidly “tolerize” asthmatic patients to a host of dietary and environmental precipitants. Even recalcitrant steroid-dependent patients can thus be weaned from drug dependency. Our intravenous therapies, utilizing such nutrients as vitamin C, copper, selenium and zinc, prove helpful in enhancing tolerance, mediating immune system responses, and achieving wellness. Nutrition and diet, including supplements, tailored to each individual’s food sensitivities, allergies and medical issues are all part of the core treatment protocols at the Hoffman Center.

Asthma also is a disease of autonomic nervous system dysregulation. All asthmatics are perpetually in flight from a parasympathetic-dominant state that allows mucus secretions to accumulate in the lungs and breathing tubes to collapse. One might say that asthmatics are hooked on stress, deriving stimulation for their flagging sympathetic nervous systems from sources as diverse as caffeine, sugar, emotional turmoil and the powerful adrenalin-like drugs they take. Frantic efforts at artificially buoying the autonomic response culminate in exhaustion as energy bank accounts become overdrawn. Relaxation, yoga, sophisticated pranayama breathing exercises and proper sports activities, such as swimming, help to stabilize the autonomic nervous system. Acupuncture, and sometimes chiropractic, can play a role in properly "rebooting" the invisible meridian channels that link lungs, adrenals and brain.

The search for better control of asthma requires patient involvement and expert detective work by the physician. But by using the multitude of techniques now at our disposal, there is hope that asthma can be reversed.

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