Asthma continues to be a clinically important disease despite decreasing mortality from the condition. Asthma prevalence, as well as urgent office appointments, emergency department visits, and hospitalizations associated with asthma, are all increasing in the United States and globally.\(^1\)\(^2\) Multiple theories exist regarding the increase in prevalence, but most authorities agree that the increases in “asthma attacks” and in the associated burden-of-care are secondary to poor adherence—including the underestimating of patients’ asthma severity by healthcare providers and the failure by patients to accurately estimate their own asthma severity.\(^3\) The end result is poor asthma control and the need for patients to seek urgent care.

In addition, there is now agreement among most “asthmatologists” that exercise is beneficial for patients with asthma.\(^4\) This conclusion seems ironic, because exercise-induced asthma attacks are of great concern to patients with asthma. For this reason, international experts in exercise-induced asthma have changed the name of this condition to exercise-induced bronchoconstriction (EIB), or exercise-induced bronchospasm, to emphasize that exercise does not actually induce asthma.\(^5\)\(^6\)

Understanding the mechanisms of EIB is crucial for the management of this condition. Thus, I requested Sandra D. Anderson, PhD, DSc, who is a world-renowned expert in EIB, to submit a manuscript on this subject. After reading her article, I think you will agree that the first step in introducing your patients to exercise is to control their asthma—and then to start the exercise program gradually.

Inflammation is the key component of asthma that we need to address. As with EIB, understanding the mechanism of inflammation is crucial to effective treatment. To address this matter Faoud T. Ishmael, MD, PhD, who excels in both the clinical setting and in bench-top research, shares his insights.

Also in this issue, Thomas L. Mertz, DO, PharmD, an allergy, asthma, and immunology fellow who is a board-certified in pediatrics and internal medicine, reviews the recent literature on asthma to update us on the latest knowledge regarding this illness. I hope that his dedication to the subject will provide you with insight into “what is new in asthma,” allowing you to improve the care of your patients with asthma.

In my contribution to this issue (which I wrote with Brian Piazza, a second-year medical student at Pennsylvania State University), my tasks were to discuss the newest asthma guidelines from the National Heart, Lung, and Blood Institute (NHLBI) and to present evidence-based information about additional treatments that are not included in the guidelines.

Rounding out the articles in this series, Constance Young, special medical correspondent, discusses options for avoiding asthma triggers. Her article should help physicians communicate more effectively with their patients.

In conclusion, I hope you come away with the following 4 points: 1) exercise-induced bronchoconstriction is common, but with proper management, the vast percentage of patients with asthma can and should exercise regularly; 2) inflammation is the key target for treatment, and inhaled corticosteroids are the drugs that are indicated for most patients with asthma; 3) tiotropium, ipratropium, zileuton, montelukast, and omalizumab all have places in asthma management, but none of these drugs have the benefits of inhaled corticosteroids; 4) the overuse of long-acting β-agonists is of concern, and these medications should be used only when asthma fails to be controlled with medium to high doses of inhaled corticosteroids.

I hope you find this issue of The Whole Patient to be useful and helpful in your day-to-day management of asthma.

References


Timothy J. Craig, DO, is a professor of medicine and pediatrics in the Department of Allergy and Immunology at The Pennsylvania State University (PSU) College of Medicine in Hershey. He has received a Distinguished Educator award from PSU.He is also director of the Allergy, Asthma, and Immunology Section and of Clinical Respiratory and Allergy Research at PSU. Dr. Craig is an active member of the American Academy of Allergy, Asthma, and Immunology; American College of Allergy, Asthma, and Immunology; American College of Osteopathic Internists; Joint Council of Allergy, Asthma, and Immunology; and Pennsylvania Allergy and Asthma Association.