Quarterly Asthma Newsletter

Report Highlights:

◊ Recent research related to patients living with asthma, including:
  - E-cigarette use,
  - Discrimination,
  - Occupational health,
  - Athletes with a cough complaint, and
  - Asthma and obesity.
◊ Program updates and upcoming educational opportunities.

News

Stay safe this wildfire season! Take time to learn about health hazards, precautions, recommendations for physical activity, and current air quality.

- Prepare for Wildfire Smoke
- Wildfire Smoke and Your Health
- Smoke Updates and Air Quality
- Outdoor Activity Guidelines

Research Updates

E-cigarette use and cigarette smoking

Researchers analyzed data from the Monitoring the Future study, a nationally representative survey that randomly selected 12th grade students to complete in-school surveys in 2014 and were resurveyed in 2015. The authors found that high school seniors who had never smoked a cigarette and were recent vapers were more than four times more likely to report past-year cigarette smoking at follow-up. These findings suggest “vaping as a risk factor for future smoking is a strong, scientifically-based rationale for restricting youth access to e-cigarettes” (pg. 1).

Discrimination and asthma rates

Youth aged 8 to 21 years who participated in the Genes-Environments and Admixture in Latino Americans study and the Study of African Americans, Asthma, Genes, and Environments were included in this study to review associations of perceived discrimination with asthma diagnosis and asthma control. African American children who reported discrimination had 78% greater odds of experiencing asthma than those who did not report discrimination. Discrimination was also associated with increased odds of poor asthma control in African American children. These effects were not seen in Latino and Mexican American youth; however, socio-economic status did increase the effect of perceived discrimination on having asthma in those two groups.
Published in CHEST, February 2017, Vol. 151, No. 2
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The authors performed a systematic review to study:

1. The main causes of acute and recurrent cough, either exercise-induced or not,
2. How cough is assessed; and
3. How cough is treated in the population of athletes.

Suggestions for management were established as a result of this literature review. The article is free to view through CHEST in its entirety. A summary of suggestions made by the authors is below. These suggestions are all consensus-based and ungraded, except for the second item, which received the grade 2B.

Athletes aged 12 or older complaining of acute or recurrent cough:

- First, evaluate for the most common causes of cough in this group, such as asthma, exercise-induced bronchoconstriction (EIB), respiratory tract infections, upper airway cough syndrome resulting from rhinosinus conditions, and environmental exposure related to the training environment.

- Perform pulmonary function tests, particularly bronchoprovocation challenges, and assess allergies to common airborne allergens. This could identify asthma or EIB and demonstrate the effects of environmental exposures.

- Conduct a systematic investigation based on the suspected causes identified in the initial clinical assessment. Pay particular attention to the athlete’s sport, training environment, and the context in which the cough occurs (for example, if it occurs during exercise).

- Establish a treatment trial based on the suspected causes of cough similar to the general population, while considering sport and training environment. Review and consider potential side effects of medications that could interfere with training performances and anti-doping regulations.

In conclusion, the authors recommend randomized control trials be performed by investigators to learn more about how to optimally treat cough in the athlete population.
**Occupational Asthma**


Researchers conducted a retrospective review of all cases reported to the SHIELD surveillance system for occupational asthma in West Midlands, UK, between 1989 and 2014. Descriptive statistics were used to identify both characteristics of works and evidence for sensitization to acrylic compounds. These compounds can be found in a number of different industries, including: manufacturing, health care, beauty, and printing. Researchers also found novel cases involving teachers exposed to floor adhesives. Ultimately, 20 cases could be linked to acrylic compound exposure. These findings represent the largest reported series of occupational asthma caused by acrylic compounds, which can often be seen used with “other, perhaps better recognized, sensitizing agents such as isocyanates and epoxy resins.”


The authors of this paper outline the importance of accurately diagnosing occupational asthma (OA), or asthma caused by work, and distinguishing it from work-exacerbated asthma (WEA), or pre-existing asthma exacerbated by the work environment.

Because there is no basic test to diagnose OA with confidence, many providers rely on the combination of a variety of procedures in an iterative process. However, through a review of the literature, the authors find insufficient quantitative evidence to support or guide a stepwise diagnostic approach. The objective of this paper is to provide such an approach.

Access the full text of the article through the Wiley Online Library to see Figure 1, the flowchart designed for diagnosing OA, as well as a thorough review of the various tests and barriers of diagnosing occupational asthma.

**Asthma and Obesity**


Researchers worked with 25 obese asthmatic (OA) patients, 30 obese nonasthmatic (ONA), and 30 mild to moderate lean asthmatic (LA) age-matched patients in a cross-sectional study. Through using nuclear magnetic resonance (NMR)-based metabolomics, researchers discovered that OA patients are “characterized by a respiratory metabolic fingerprint fully different from that of patients independently affected by asthma or obesity” and believe this finding has “important diagnostic and therapeutic implications” (pg. 1537).
Upcoming Events

**Montana Diabetes Advisory Coalition**
July 21, 2017
Northern Hotel, Billings
*For more information, please contact Susan Day at sday@mt.gov*

**MACP August Webinar: Helping kids stay healthy this school year**
August 17, 2017
Via WebEx
*For more information, please contact Anna Bradley at abradley@mt.gov*

**Montana Asthma Advisory Group**
August 25, 2017
Helena, MT
*For more information, please contact Sarah Brokaw at sbrokaw@mt.gov*

**Montana Public Health Association Conference**
September 19-20, 2017
Missoula, MT
*For more information, visit the MPHA website at www.mtpha.com*

Program Updates

- Planning has begun for the 2018 Big Sky Pulmonary Conference! Save space on your calendar for March 15-17 at Fairmont Hot Springs.
- The MACP is always looking for new members to participate in the Montana Asthma Advisory Group (MAAG). If you have a passion for helping Montanans living with asthma, or are a person living with asthma, and would like to network with others in the field, please contact Sarah Brokaw at sbrokaw@mt.gov.

Online Resources

**dphhs.mt.gov/asthma**
- Archived asthma-related webinars with free CEUs
- Archived surveillance reports on asthma-related subjects
- Resources for health care facilities, asthma educators, schools and school nurses, coaches, day care providers, and people living with asthma