Interview with Alisa Smith

In this interview, EPA's Indoor Environments Division Communication Specialist Kelly Hunt talks with Alisa Smith, a biologist for the Indoor Environments Division.

KH = Kelly Hunt (EPA, Communication Specialist)
AS = Alisa Smith (EPA, Indoor Environments Division)

Kelly Hunt: Hello and welcome to the asthma edition of Science Notebook. I'm Kelly Hunt from EPA's Indoor Environments Division. Today I have the privilege of speaking with Alisa Smith, a biologist for the Indoor Environments Division, on her work addressing asthma awareness. Alisa currently serves as the team leader for EPA's Asthma Program. Prior to joining EPA, she led a research team at the University of Virginia investigating the role of indoor allergens in asthma and allergic disease. Glad to have you here, Alisa.
Alisa Smith: Hi Kelly, it's great to talk to you.

KH: So, how does the indoor environment affect asthma? And what are environmental asthma triggers?
AS: Environmental asthma triggers are things that make asthma worse. They may cause symptoms, such as coughing or wheezing or even more severe problems, such as an asthma attack – that is a constriction and narrowing of the airways that causes severe difficulty breathing, and it requires immediate medical attention. Triggers include irritants and allergens, also respiratory viruses, and even exercise can be an asthma trigger for some folks. Common indoor triggers include secondhand smoke and allergens from animal dander, dust mites, molds and pests, such as cockroaches and mice.

KH: I always hear about pollen counts, so I think in many people's minds asthma is linked to the outdoors. Is the indoor environment as important as what is outside? And what should we be concerned about?
AS: Pollen and other outdoor air pollutants, including ozone and particle pollution, can be asthma triggers. Pollen and ozone are seasonal, that is they tend to be a problem at specific times of the year. And we can usually go indoors or change our outside schedule to avoid these things. Indoor triggers, on the other hand, and in particular indoor allergens, are perennial, that is, they are present year-round. And since we spend the majority of our time inside, at home, at school or at work, indoor triggers are a serious risk for most people with asthma.

KH: Can you give me a brief overview of some of the recent research surrounding asthma attacks and indoor triggers? And what does this work tell us?
AS: There's a robust research base going back more than 15 years documenting the relationship between indoor exposures and asthma. And more recently, research has focused on understanding interventions that can help reduce exposure to triggers. One of the most important studies in this area is the Inner City Asthma Study. This work is part of an ongoing series of investigations, and it forms the basis of much of our guidance today. One arm of this study shows that children with asthma have improved outcomes, that is, reduced urgent care visits and more symptom-free days when they receive environmental remediation in their home. And that remediation needs to be tailored to the specific

sensitivity and exposures for that child. This study tells us that it's possible to make changes in the home environment, such as having a no-smoking policy, keeping pets out of the bedroom, and that these changes can reduce asthma symptoms.

KH: So, what's next?
AS: Well, a couple of things. To help get the word out to parents and caregivers of children with asthma, we are launching a new public service advertising campaign. These TV and radio ads, in English and in Spanish, tell parents about simple steps they can take to remove asthma triggers at home. Parents are an important target audience, but they also need to be supported from health care professionals, schools and other community members. So, to help improve the delivery of asthma care services in communities, we'll be hosting the National Asthma Forum. The forum brings together hundreds of health care providers, including family physicians and school nurses, public health and environmental professionals and community advocates. And at the forum, participants learn effective strategies for delivering comprehensive asthma care in their communities, that means state-of-the-art medical care and environmental trigger interventions at home and at school.

KH: What drew you to this kind of work?
AS: I became interested in public health policy about 8 years ago, really as a way to quickly move scientific findings into public health practice. Although we still don't know how to cure asthma, we do know what it takes for people with asthma to live full and active lives. It's rewarding to be a part of that effort at EPA.

KH: What's IED's role in asthma and triggers work? How do you get the word out to your audience about this important topic?
AS: Our role is to translate research findings into action steps that can make a difference for people with asthma. And we use a variety of technologies to deliver this information. For example, research shows us that avoiding secondhand smoke is critical for children with asthma. So, we developed the Smoke-free Home Pledge to help families create healthy, smoke-free environments. Families can download pledge certificates from our website and can order free brochures, magnets and decals to share with others. To reach health care providers, we use webinars to deliver training about asthma and asthma trigger management. This technology allows providers to participate without the need to travel, and the webinars are archived, so they are always available as a resource. Effective communication is at the heart of our work. We provide education and outreach in multiple languages and using print and electronic technologies that meet the needs of our audiences.

KH: Well, thank you very much, Alisa, for taking time to speak with me today on identifying environmental risks for asthma. To learn more about asthma, explore the rest of the asthma edition of Science Notebook or visit EPA's asthma website at epa.gov/asthma.