Obesity & Asthma: A Challenging Combination

By Anne Dixon, MA, BM BCh

We all know that factors such as allergies are associated with asthma, and can worsen asthma control, but over the last 20 years we have begun to appreciate that factors seemingly unrelated to the lungs, such as obesity, can also be associated with asthma. And with the increasing prevalence of obesity in children and adults, this is now becoming a major public health issue in the United States.

Obesity is a risk factor for developing asthma in both adults and children, and according to data from the CDC, the prevalence of asthma in obese adults is approximately 11%, whereas in lean adults it is 7%. This may also be contributing to disparities in asthma: in non-Hispanic people with a lean BMI, the prevalence of asthma is 6.6%, but in those with a BMI in the obese range (≥ 30 kg/m²), the prevalence is approximately double, at 13.6%.

There are likely many reasons that obesity is associated with asthma. These include the fact that common environmental exposures may predispose to the risk of developing both asthma and obesity;

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The Youth Vaping Disaster

By Lester Hartman, MD

Nicotine addiction through vaping is a pediatric and adolescent disease of epic proportions. While the number of teens using vapes has dropped from over 5 million to 3.6 million, many of those that continue to vape are now daily users.

The nicotine potency of US JUUL disposables such as PUFF BARS and Hyde are 4 times greater in nicotine concentration than the legal limits in Europe. In addition, the disposables have internal pods which can contain over 1000 puffs, the equivalent of 5 packs of cigarettes. 95% of lifetime nicotine addicts began using nicotine products before the age of 21. If kids experiment, the risk of addiction in the 12-25 age group is as high as 1:3 ratio. This statistic should be a warning.

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exposure to parents who smoke, and exposure to air pollution are risk factors for the development of both asthma and obesity. There may also be genetic factors which predispose to the development of both asthma and obesity. Some of the medications used to treat asthma may increase the risk of developing obesity, particularly if individuals are on drugs such as prednisone. Another factor might be that people with asthma have reduced physical activity tolerance, which may also predispose towards the development of weight gain. The link between these two disorders is likely complex, and varies between different individuals.

The association of asthma with obesity is particularly important, as people with obesity tend to suffer with worse asthma control, and have an increased risk of asthma exacerbations and being hospitalized for asthma. People with obesity do not respond as well to standard asthma medications such as inhaled corticosteroids, and combination therapy with inhaled corticosteroids and long-acting beta agonists. The reasons for worse response to medication are also likely multifactorial and include altered pathways contributing to disease, as well as some intrinsic differences in immune pathways that may lessen efficacy of some of the medications usually used to treat asthma in people with obesity. This altered response to medications can make it challenging to treat asthma in people with obesity.

One intervention that is currently being investigated for the treatment of people with obesity and asthma is whether improvement in dietary quality might improve asthma: some small studies suggest that a high fat diet might actually impair response to albuterol and increased airway inflammation, and that improvement of dietary quality might improve asthma control, though larger studies are needed. Lifestyle interventions to produce weight loss might also be helpful for people with asthma and obesity: a few single center studies have been done and found that a 5 to 10% reduction in total body weight improved asthma control. Some people with asthma and obesity have undergone weight loss surgery, and this improves asthma and reduces asthma exacerbations, but certainly is not for everyone.

It is important for people with asthma, and their care providers, to understand that obesity and asthma are closely linked, and that the presence of obesity worsens asthma control, and the presence of asthma likely also makes weight control harder.

Anne Dixon, MA, BM BCh
Director of Pulmonary and Critical Care Medicine
Director, Vermont Lung Center
Professor of Medicine
University of Vermont Medical Center
Larner College of Medicine
Teens can still buy vape in school and now can also text a dealer to meet them at an agreed location. Bathrooms with detectors seem to be prohibiting some people from vaping in schools, though stay tuned for the Fall of 2021. The marketing continues, on TikTok, Instagram and YOUTUBE by influencers who are paid or given free vape products for their videos.

In schools, kids and teens will now have to confront peer pressure face to face as well as virtually. I have spoken with kids in my practice who report aggressive behaviors such as punching a hole in the wall, throwing a computer, or starting a fight at school when they are withdrawing from their nicotine buzz. Likewise, kids who develop emerging milder EVALI (E-cigarette Vaping Associated Lung Injury) can end up on oral steroids for months and gain enormous amounts of weight. I have a young adult who has vaped THC and nicotine for 3 years; he has developed a type of nasopharyngeal cancer unheard of under the age of 40.

Intuitively, though vaping would seem to cause asthma, this is not yet clear. We do know that on a cellular level there is cell death and DNA damage from flavorants (flavorants are a flavoring agent). Most types of flavorants are focused on scent and taste and possibly from the vegetable oil and propylene glycol in vape productions. Vaping also causes airway hyperresponsiveness. It would seem vape would at least exacerbate asthma.

What does our future hold with kids returning to school and the pandemic not over?

Yale physician, Dr Nicholas Christakis, reminds us in his book, Apollo’s Arrow, that what followed the Spanish Flu was the Roaring 20’s. Likewise, he predicts that post pandemic life attitudes may be similar. To quote Albert Camus from The Plague “To state quite simply what we learn in time of pestilence: That there are more things to admire in men than to despise.”

If you want to help stop the vape epidemic, visit PAVE www.parentsagainstvaping.org and sign the petition to the FDA to stop menthol vapes from being sold in the United States.

One more set of products called “WELLNESS” VAPES or DIFFUSERS are just e cigarettes in which people vape melatonin, vitamin B12 and essential oils. None of these products are regulated by the FDA or tested for safety. The 2 biggest producers are MONQ and CLOUD. In TikTok, teen girls seem to be the targeted population as shown to me by a 4th grader on their cell phone. I suspect these products may have small amounts of nicotine to hook kids. Also, Velo, ZYN, Dryft, and Lucy Gum are oral nicotine products which may entice kids to smoke or vape secondarily. Please remember when you hear people advocating for vape, they usually fail to talk about its effects on kids and the teen brain.

Lester Hartman, MD is a Pediatrics Specialist at Westwood-Mansfield Pediatrics. He is affiliated with Boston Children’s Hospital.

Additional Vaping Resources:

- AAFA New England began a new initiative in 2020 “You Deserve the Truth About Vaping”. Visit our website asthmaandallergies.org to view our previous Speaker Series event presented by Improbable Players, a troupe of actors who showcase scenes that resonate with middle and high school students who may be considering vaping. This is a must-see program for adults to learn vaping facts and detect vaping behaviors.
- Visit cdc.gov to view The National Youth Tobacco Survey (NYTS). NYTS is a school-based survey that collects information on tobacco use from middle school (grades 6 to 8) and high school (grades 9 to 12) students. NYTS includes measures on tobacco-related behaviors, attitudes, beliefs, and exposure to pro- and anti-tobacco influences.
- To learn more about vaping go to Boston Children’s Hospital website at childrenshospital.org. They have many valuable resources. Reach out to the Division of Pulmonary Medicine for help.

Suggested Reading:

- The Devil's Playbook: Big Tobacco, Juul, and the Addiction of a New Generation By: Lauren Etter
- Big Vape: The Incendiary Rise of Juul Audible Logo By: Jamie Ducharme
Dr. Anne Dixon, MA, BM BCh

Dr. Anne Dixon is currently a professor of medicine, and the director of Pulmonary and Critical Care Medicine at the University of Vermont Larner College of Medicine. Dr. Dixon received a degree in natural sciences from the University of Cambridge, and her medical degree from Oxford University. She completed residency training in internal medicine at the Johns Hopkins Hospital, and fellowship training in pulmonary and critical care at the University of Washington.

Dr. Dixon’s scientific focus is in the area of obesity and asthma; she has produced numerous papers, book chapters, and edited a book on this subject. A major part of her research career has been work in clinical trials with the American Lung Association Airways Clinical Research Centers network. Dr. Dixon has been the principal investigator (PI) of two studies completed by the network, and is the current PI of two pilot clinical trials for the network.

Jacqueline Rodriguez-Louis, MPH, MEd

Jacqueline Rodriguez-Louis is currently the Program Leader for Community Outreach, Partners Asthma Center, Brigham and Women’s Hospital. Jackie runs the asthma teaching for the nurses and lay people. In addition, she connects one on one with the patients by conducting home visits to help with environmental causes of asthma. When Jackie is not at her primary job she also spends time working with several physicians at Uphams Corner doing pulmonary function testing. Her life has been dedicated to improving access to asthma education and tools.

AAFA New England has been fortunate to have Jackie as the lead consultant on our Be Smart and Breathe Easy asthma pilot program that we implemented in three inner-city schools in 2018. Jackie also was interviewed by AAFA New England and submitted a 2-part series on Health Disparities in our Fall 2020 and Winter 2021 Asthma & Allergy Bulletins.

We are honored to celebrate our Champions of the Allergy & Asthma Community at our "Virtual" Fall Gala 2021 November 4th 7 p.m.

Please invite your family, friends, neighbors, and colleagues to join us online for 45 minutes of inspiration and enjoyment as we highlight the important work of AAFA New England and to thank you for your support. The evening will include a keynote address from Dr. Elliot Israel, MD, Director of the Respiratory Therapy Department, Director of Clinical Research in the Pulmonary and Critical Care Medicine Division and an associate physician at Brigham and Women’s Hospital (BWH), Professor of Medicine at Harvard Medical School.

Dr. Elliot Israel, MD
Registration Open for Fall Events!

Asthma Goal Series: Living with Asthma – The Engaged Patient

We will review: The Impact of Asthma, What is an engaged patient?, Why is it important to be engaged in your health care?, and Practicing Self-Care. Presented by: Arnita Roberts-Christie RN, BSN, MS, GSK Patient Engagement Liaison

1st Date: Thursday, 9/16/21
Time: 12:00 p.m. - 1:00 p.m.

2nd Date: Saturday, 9/25/21
Time: 10:00 a.m. - 11:00 a.m.

Dr. Lakiea Wright, Associate Physician, Brigham and Women’s Hospital

Part II: Health Care Disparities in the Asthma and Allergy Community Thursday 10/26/21 at 12:00 p.m.

We continue to explore how social determinants of health, structural racism, and implicit bias play major roles in preventing health equity. Roundtable discussion by:

Dr. Margee Louisias, Director of Diversity and Inclusion with the Division of Allergy and Immunology, Brigham and Women’s Hospital

Dr. Quindelyn Cook, Practicing Allergist-Immunologist, Boston Medical Center. She is also an Assistant Professor in the Department of Pediatrics at Boston University School of Medicine.

For all AAFA New England’s Speaker Series events register online at asthmaandallergies.org

LEGISLATIVE ADVOCACY

“We Work for Health” Partners Meetings

AAFA New England, though our association with The Strategy Group (a public affairs, advocacy and community relations support firm), is a part of the We Work for Health grassroots initiative that shows how biopharmaceutical research and medical innovation work together to make strong, vibrant contributions to the health and economic security of individuals, local communities, states and the nation. In the months of June and July, Julie Flynn convened virtually with other partner organizations to participate in multiple meetings with senate and congressional offices on the pending legislation that is important to the asthma and allergy community.

H.R.3

AAFA New England would like to share our deep concern about The Lower Drug Costs Now Act, or H.R.3, which deals with prescription drug and healthcare coverage.

This legislation creates a barrier between patient access and the critical medications needed. The bill mandates international drug price setting that bases its justifications around foreign countries, neglecting the fact that many of these countries don’t have access to new medicines or suffer serious delays in obtaining them. The proposed legislation lacks clarity and ultimately means the Secretary of Health and Human Services will arbitrarily set drug prices for hundreds of drugs.

H.R.3 would eliminate the incentives that are necessary to support investments into research and development (R&D) for disease states that don’t currently have cures. If we, as a nation, don’t encourage the biopharmaceutical industry to focus heavily within their R&D departments, we may never see an end to the chronic diseases, like asthma and allergies, including food allergies, that have affected so many of us in our community. H.R.3 would restrict future innovation and create permanent job losses that may reach as high as one million. We encourage you to contact your United States senator or congressman/woman to voice your opposition of this bill.

AAFANE voices support for MA H.556 and MA S.299

On May 20, AAFA New England President Jan Hanson provided written and virtual oral testimony in support of MA H.556 An act relative to emergency stock supply of epinephrine in schools and MA S.299 An act to establish food allergy plans, on behalf of our community, during the Hearing of the Joint Committee on Education.
Welcome to Julie Flynn, Executive Director

“We are very excited to have Julie join our team as we move forward and continue to grow and serve our community”, said Jan Hanson, President of AAFA New England. “The experience, skills and passion she brings to the Foundation as our Executive Director will be invaluable as we fulfill our mission to improve the quality of life for those living with or caring for someone with asthma and/or allergies.”

Julie is a highly motivated business leader with a background in both the for-profit and nonprofit space. She has extensive work experience developing corporate partnerships, formulating programs that address the needs of those being served, and leading organizations through challenging periods. Her professional experiences, positivity and focus will build on AAFA New England’s initiatives and help to achieve AAFA New England’s goals to support, educate and empower its community.

“I am thrilled to join the team at the Asthma and Allergy Foundation of America, New England Chapter”, stated Julie Flynn. “I am excited for the future partnerships that will be built and being given the opportunity to work for an organization dedicated to the control and cure of asthma and allergies. I look forward to continuing the mission to help people live active, healthy lives with asthma and allergies.”

Julie holds a Bachelor of Arts degree in English from Boston College and lives in Mansfield, MA with her family.

Thoughts from the Julie

As we approach Fall, I know that many of you are excited about a return to normalcy after over a year and a half of fighting the pandemic.

Here at AAFA New England, we pride ourselves in delivering the programs and services that are vital to our asthma and allergy community. We hope that you have found the resources we have provided to be beneficial and impactful. In order to continue to do this important work for our community, we need your support now more than ever. In this bulletin, as well as in future ones, I will be providing some thoughts and ideas about fundraising. Fundraising is not just FUN, it is integral in raising awareness and funds to continue our mission to control and cure asthma and allergies so that those living with these chronic diseases can live healthy active lives. An organization cannot persevere only by receiving support from companies and foundations. Individual fundraising is necessary to the health any organization. No one is a better advocate for AAFA New England than YOU! By fundraising, you become a mission advocate for AAFA New England. Whether you are a kid, a teen or an adult, you can support AAFA New England’s mission in a variety of ways. As a volunteer myself, the best advice I ever received about fundraising was to find something you like and make that a fundraiser. Anything can be a fundraiser. Do you like to run? Run a 5k on behalf of AAFA New England and raise funds. Do you like Jeopardy? Host a trivia night for your community. Are you trying to get your kids to read more? Work with your local school to have a contest where the kids get pledges based on the number of books they can read over a semester. Trying to get your kids to get psyched about math? Ask your local schools to host a penny wars contest where grades can compete against each other to see which class donates the most. As you can see, it’s not as hard as it sounds. If you need any ideas or would like to talk about a potential fundraising idea, I would love to connect with you. Feel free to contact me at julie@aafane.org. I look forward to helping you put the FUN in FUNdraising!

Respiratory Care Product Donation

It is AAFA New England’s goal to help improve access to needed respiratory care equipment for underserved communities across the areas we serve. On Wednesday July 21st, Executive Director Julie Flynn travelled to Methuen, MA accompanied by Arnita Roberts-Christie, RN, BSN, MS - GSK Patient Engagement Liaison, where AAFA New England presented Mayor Neil Perry with more than 800 peak flow meters to be distributed at the Methuen Care Center for his community. Mayor Perry, Julie and Arnita then sat down for Mayor’s Minutes, a weekly program providing information and updates about the City of Methuen. Julie spoke about the work being done by AAFA New England and participated in a live Q&A from the citizens of Methuen.
RESEARCH UPDATE: OPPORTUNITIES TO HELP

UMass Boston Children's Research Study:

Do you have a child with a food allergy in 3rd, 4th, or 5th grade during the 2020-2021 school year?

Does your child live in New England?

You and your child may be eligible to participate in a study through the University of Massachusetts Boston about what it’s like to have food allergies in school! Your child will receive a gift card for survey and/or virtual interview participation.

In recent years, administrators, nurses and policymakers have created rules to try to make school safer for students with food allergies. We want to learn about what students think and feel about what it’s like to have food allergies. We’re hoping to hear about students’ experiences with food allergies in school, and about their ideas to improve allergy education and school rules. The knowledge gained from the research may contribute to school allergy policy developments.

We’d also like to know about your observations of your child’s experiences.

If you have any questions about opportunities to participate, please reach out to the principal investigator of this project, Sadie Cathcart, at sadie.cathcart001@umb.edu. Your child will receive a $5 Target gift card if s/he participates in the online survey portion of the study and is among the first 60 respondents, and/or a $20 Target gift card if s/he chooses to engage in virtual interview participation. Use the following link to be directed to more information, consents, and both caregiver and child questionnaires. Thank you for your time and consideration.

https://umassboston.co1.qualtrics.com/jfe/form/SV_6EdhwEk3bk08fij?fbclid=IwAR16Oi-4Up76134gxHyYQkW3QETVUF3yNgwJzun9Chuun07fNfKOLOhE

THANK YOU TO OUR CORPORATE PARTNERS

AAFA New England is grateful for the support of our Corporate Partners in 2021. Their generous support allows us to provide valuable resources to help our members live life fully with asthma and allergies.

The Thoracic Foundation

ASTHMA & ALLERGY BULLETIN

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New England Chapter
781-444-7778
e-mail: aafane@aafane.org

The Asthma and Allergy Foundation of America, New England Chapter, is dedicated to helping people with asthma and allergic diseases, and those who care for them, through education, support for research and an array of services.

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Join us for our 2nd "Virtual" Gala on November 4th at 7:00 p.m. Registration link can be found at asthmaandallergies.org

Event Schedule:
Welcome by Executive Director, Julie Flynn
President Jan Hanson shares AAFANE’s 2021 Focus
Keynote by Dr. Elliot Israel
Programs Update: Director of Education, Amy Dow
Musical Interlude by Louis Martins
Champion awards bestowed
Silent Auction

AAFA New England is donating over 18,000 new Respiratory Care Products!

Available items: Brand new Peak flow meters (adult & pediatric), mouthpieces (adult & pediatric), nose clips and calibration syringes, in their original packaging, are available for immediate distribution.

It is AAFA New England’s goal to help improve access to needed respiratory care equipment for community health centers, schools, and camps for patients and families impacted by asthma in underserved communities.

If you would like more information or to place an order for any of the above products please email us at respicare@aafane.org

Subscribe to our Youtube channel at youtube.com Search: AAFA New England
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