

February 2016

May is Asthma Awareness Month

May 5, 2016 is World Asthma Day

The U.S. Environmental Protection Agency (EPA) has developed an Event Planning Kit to equip state and local asthma programs to hold community-based asthma awareness and action events during Asthma Awareness Month. Inside, you will find ideas and helpful tips for planning and running powerful community asthma events in schools, hospitals, clinics, and state capitols. You will also find sample materials and a resource order form to help prepare for your events. It's not too early to start planning!

<http://www.epa.gov/asthma/asthma-awareness-month-event-planning-kit>

Asthma, a lung disease, affects over 22 million people living in the United States, including 1 in 12 children. It causes 3 in 5 people living with asthma to limit their physical activity or miss days at school and work. Asthma is also expensive, costing the nation \$56 billion each year.

On World Asthma Day (Tuesday, May 5) and throughout May, people with asthma and organizations dedicated to asthma control and education join together to increase awareness about asthma and improve the lives of all people with asthma.

Also, check out the Centers for Disease Control & Prevention (CDC) Asthma Awareness Toolkit located below to help take control of asthma & bring awareness to your community!

http://www.cdc.gov/asthma/world_asthma_day.htm

Call for AE-C Research Proposals

The NAECB Research Committee has an exciting and novel opportunity for all AE-Cs. As a part of our charge, we have designed and funded a research grant opportunity for 2016 which proposes to validate the role of certified asthma educators (AE-Cs). We recognize that quality research is the cornerstone of evidence-based medicine and that evidence-based asthma education optimizes patient outcomes. The mission of the NAECB is to promote optimal asthma management and quality of life among individuals with asthma by advancing excellence in asthma education through the certified asthma educator (AE-C) process. There exists a great need for validating the beneficial role of AE-Cs within asthma education programs through the research process and this grant opportunity focuses on that validation role.

We invite you to apply for the **2016 AE-C Research Grant Award** (please apply online at www.naecb.org). The grant recipient(s) will be awarded up to \$10,000 in order to conduct their research project. The grant application is due by **11:59 p.m. on Friday, April 1, 2016**. The Research Committee will then review applications and grant recipient(s) will be notified no later

than Friday, July 1, 2016.

We welcome your questions and appreciate your partnership in advancing our collective goals.

Introducing New NAECB Board Member Randall Rife, RRT-NPS, AE-C

Randall works at Baylor All Saints Medical Center in Fort Worth, Texas, as a Critical Care Respiratory Therapist and Certified Asthma Educator and COPD Educator. He has twenty-two years' experience in respiratory care, including adult and neonatal intensive care, adult and pediatric asthma, emergency medicine and managing patients with long-term artificial airways. In this role, he evaluates patients, and develops and implements treatment plans with an emphasis on patient education. His special talent is patient education with a strong focus on asthma self-management and treatment. Randall's strengths are making complex care plans simple to follow, helping patients gain confidence in self-care, determining the special needs of each patient, and with them, creating an Asthma Action Plan.

He is also a reviewer of research abstracts for the Association of Asthma Educators. Randall volunteers serving the homeless and at community health fairs. Randall earned his Respiratory Therapy degree in 1993 and was Valedictorian of his class. Randall is also board-certified in Neonates and Pediatric respiratory care and is an ACLS instructor.

Randall's talents include his work before becoming a Respiratory Therapist in 1993. He spent twelve years working in adult education for a Fortune 500 corporation as a classroom instructor,

has written and published a specialized curriculum taught internationally, and worked as a manager of corporate training, setting up workshops across the US and at corporate locations. He was a featured speaker on adult education methodology comparing the results of andragogy vs. pedagogy at national and regional seminars.

Despite his busy career in Respiratory Therapy, Randall enjoys his involvement with community and professional organizations. He is a member of the Association of Asthma Educators, the National Board for Respiratory Care, the American Association for Respiratory Care and the Texas Society for Respiratory Care. Randall lives in Fort Worth Texas with his wife and their three cats, three dogs and a parrot. They volunteer for a local dog rescue group, and enjoy live theater and travel.

Asthma in the News

Common genetic variation safeguards children from asthma

Too much residential traffic removes the protective effect a specific gene has on lowering asthma risk, according to a new USC study.

<http://bit.ly/1S6so0E>

Early antibiotic use 'may predispose children to weight gain and asthma'

The use of antibiotics in young children may alter the natural populations of gut microbes in a way

that leaves them predisposed to weight gain and asthma in later childhood, according to new research.

<http://bit.ly/1nIeXN>

Barriers to asthma management for school nurses

This study examined barriers to asthma management for school nurses in the school setting. Findings revealed multiple barriers: six themes emerged that included lack of resources and support, insufficient time, communication challenges, limited knowledge, and lack of awareness of school nurses' expertise.

<http://bit.ly/1JVE1Pv>

Changing trends in asthma prevalence among children. (Pediatrics)

Akinbami LJ, Simon AE, Rossen LM.

Background

Childhood asthma prevalence doubled from 1980 to 1995 and then increased more slowly from 2001 to 2010. During this second period, racial disparities increased. More recent trends remain to be described.

Objective

To assess the associations between parental health literacy (HL), parental ability to use a written asthma management plan (WAMP), and child's asthma control.

Methods

We analyzed current asthma prevalence using 2001-2013 National Health Interview Survey data for children ages 0 to 17 years. Logistic regression with quadratic terms was used to test for nonlinear patterns in trends. Differences between demographic subgroups were further assessed with multivariate models controlling for gender, age, poverty status, race/ethnicity, urbanicity, and geographic region.

Results

Overall, childhood asthma prevalence increased from 2001 to 2009 followed by a plateau then a decline in 2013. From 2001 to 2013, multivariate logistic regression showed no change in prevalence among non-Hispanic white and Puerto Rican children and those in the Northeast and West; increasing prevalence among 10-to 17-year-olds, poor children, and those living in the South; increasing then plateauing prevalence among 5-to 9-year-olds, near-poor children, and non-Hispanic black children; and increasing then decreasing prevalence among 0-to 4-year-olds, nonpoor, and Mexican children and those in the Midwest. Non-Hispanic black-white disparities stopped increasing, and Puerto Rican children remained with the highest prevalence.

Conclusion

Current asthma prevalence ceased to increase among children in recent years and the non-Hispanic black-white disparity stopped increasing due mainly to plateauing prevalence among non-Hispanic black children.

<http://pediatrics.aappublications.org/content/early/2015/12/24/peds.2015-2354>

Understanding the association of human rhinovirus with asthma. (Clinical and Vaccine Immunology)

Stone CA, Miller EK.

Human rhinoviruses are ubiquitous seasonal pathogens. They have known associations with first onset of wheezing illnesses in children and with asthma exacerbations in patients of all ages. It is not yet certain whether human rhinoviruses play a direct role in the pathogenesis of asthma by activating deleterious inflammatory responses or if they only serve as a catalyst to accelerate the disease in genetically predisposed individuals.

There have been previously demonstrated reductions in the development of the asthmatic phenotype with passive immunization against respiratory syncytial virus; however, in the case of rhinovirus, there are barriers to effective vaccine development, such as the lack of a common antigenic target due to alterations of surface markers among subtypes. It remains to be determined whether certain subtypes of human rhinovirus are more asthmagenic and therefore worthy of greater attention as vaccine candidates, but several studies have suggested that RV-C and certain RV-A strains may be more strongly linked with asthma.

<http://www.ncbi.nlm.nih.gov/pubmed/26376925>

The interpretation of dyspnea in the patient with asthma. (Pulmonary Medicine.)

Lavietes MH.

Physicians have noted dyspnea in severely ill asthmatic patients to be associated with fright or panic; in more stable patients dyspnea may reflect characteristics including lung function, personality and behavioral traits. This study evaluates the symptom of dyspnea in 32 asthmatic patients twice: first when acutely ill and again after an initial response to therapy. Spirometry was performed, dyspnea quantified (Borg scale), and panic assessed with a specialized measure of acute panic (the acute panic inventory (API)) in the 32 patients before and again after treatment. After treatment, questionnaires to evaluate somatization and panic disorder were also administered.

When acutely ill, both the API and all spirometric measures (PEFR; FEV1; IC) correlated with dyspnea. Multiple linear regression showed that measures of the API, the peak expiratory flow rate, and female sex taken together accounted for 41% of dyspnea in acute asthma. After treatment, the API again predicted dyspnea while spirometric data did not. Those subjects who described themselves as having chronic panic disorder reported high grades of dyspnea after treatment also.

We conclude that interpretations of the self-report of asthma differ between acutely ill and stable asthmatic patients.

<http://www.hindawi.com/journals/pm/2015/869673/>

The Pregnant Patient With Asthma: Assessment and Management. (Journal for Nurse Practitioners.)

Shedd GC, Hays CN

Asthma is the most common chronic condition seen in pregnant women. Women who have asthma and become pregnant are at increased risk of preterm birth and other complications, and the offspring of these women are at risk for congenital malformations at birth and respiratory diseases after the neonatal period.

In this article we provide an overview of how asthma affects this population and discuss the assessment and management of the pregnant patient with asthma.

<http://www.sciencedirect.com/science/article/pii/S1555415515010715>

Gastro-oesophageal reflux and worse asthma control in obese children: a case of symptom misattribution

Lang JE, Hossain J, Holbrook JT, Teague WG, Gold BD, Wise RA, Lima JJ
February 2016

Background

Obese children for unknown reasons report greater asthma symptoms. Asthma and obesity both

independently associate with gastro-oesophageal reflux symptoms (GORS). Determining if obesity affects the link between GORS and asthma will help elucidate the obese-asthma phenotype.

Objective

Extend our previous work to determine the degree of associations between the GORS and asthma phenotype.

Methods

We conducted a cross-sectional study of lean (20%-65% body mass index, BMI) and obese ($\geq 95\%$ BMI) children aged 10-17 years old with persistent, early-onset asthma. Participants contributed demographics, GORS and asthma questionnaires and lung function data. We determined associations between weight status, GORS and asthma outcomes using multivariable linear and logistic regression. Findings were replicated in a second well-characterised cohort of asthmatic children.

Results

Obese children had seven times higher odds of reporting multiple GORS. Asthma symptoms were closely associated with GORS scores in obese patients but not in leans. Higher GORS scores associated with higher FEV1-per cent predicted, lower airway resistance, improved airway reactance but significantly worse asthma control (Asthma Control Questionnaire). A significant but weaker association between GORS and asthma symptoms was seen in leans compared with obese in the replicate cohort.

Conclusion

GORS are more likely to associate with asthma symptoms in obese children. Better lung function among children reporting gastro-oesophageal reflux and asthma symptoms suggests that

misattribution of GORS to asthma may be a contributing mechanism to excess asthma symptoms in obese children.

<http://thorax.bmj.com/content/early/2016/01/31/thoraxjnl-2015-207662.abstract>

Early Exposure to Dogs and Farm Animals and the Risk of Childhood Asthma

Tove Fall, PhD; Cecilia Lundholm, MSc; Anne K Örtqvist, PhD; Katja Fall, PhD; Fang Fang, PhD; Åke Hedhammar, PhD; Olle Kämpe, PhD; Erik Ingelsson, PhD; Catarina Almqvist, PhD

November 2, 2015

Importance

The association between early exposure to animals and childhood asthma is not clear, and previous studies have yielded contradictory results.

Objective

To determine whether exposure to dogs and farm animals confers a risk of asthma.

Design, Setting and Participants

In a nationwide cohort study, the association between early exposure to dogs and farm animals and the risk of asthma was evaluated and included all children born in Sweden from January 1, 2001, to December 31, 2010, using registry data on dog and farm registration, asthma medication, diagnosis, and confounders for parents and their children. The association was assessed as the odds ratio (OR) for a current diagnosis of asthma at age 6 years for school-aged

children and as the hazard ratio (HR) for incident asthma at ages 1 to 5 years for preschool-aged children. Data were analyzed from January 1, 2007, to September 30, 2012.

Exposures

Living with a dog or farm animal.

Main Outcomes and Measures

Childhood asthma diagnosis and medication used.

Results

Of the 1,011,051 children born during the study period, 376,638 preschool-aged (53,460 exposed to dogs and 1,729 exposed to farm animals) and 276,298 school-aged children (22,629 exposed to dogs and 958 exposed to farm animals) were included in the analyses. Of these, 18,799 children (5.0%) in the preschool-aged children's cohort experienced an asthmatic event before baseline, and 28,511 cases of asthma and 906,071 years at risk were recorded during follow-up (incidence rate, 3.1 cases per 1000 years at risk). In the school-aged children's cohort, 11,585 children (4.2%) experienced an asthmatic event during the seventh year of life. Dog exposure during the first year of life was associated with a decreased risk of asthma in school-aged children and in preschool-aged children 3 years or older but not in children younger than 3 years. Results were comparable when analyzing only first-born children. Farm animal exposure was associated with a reduced risk of asthma in both school-aged children and preschool-aged children, respectively.

Conclusions and Relevance

In this study, the data support the hypothesis that exposure to dogs and farm animals during the first year of life reduces the risk of asthma in children at age 6 years. This information might be

helpful in decision making for families and physicians on the appropriateness and timing of early animal exposure.

<http://archpedi.jamanetwork.com/article.aspx?articleid=2467334>

Anxiety sensitivity and reactivity to asthma-like sensations among young adults with asthma

McLeish AC, Luberto CM, O'Bryan EM.

February 2, 2016

Anxiety sensitivity, particularly the physical concerns domain, is associated with more problematic asthma symptoms and greater functional limitations. It has been theorized that anxiety sensitivity fosters greater reactivity to asthma-related physical sensations; however, this theory has yet to be empirically tested. Thus, the present investigation sought to examine the role of anxiety sensitivity-physical concerns in terms of affective and physical reactivity to asthma-like symptoms.

Participants were 101 undergraduates with asthma who completed self-report measures and a straw-breathing task. Results indicated that after controlling for the effects of gender, asthma control (i.e., how well one's asthma symptoms are managed or controlled), and negative affectivity, greater levels of anxiety sensitivity-physical concerns significantly predicted greater anxiety (4.7% unique variance) and asthma symptoms (6.9% unique variance) and lower levels of lung function (4.4% unique variance) after the straw-breathing task.

These findings suggest that individuals with asthma who are fearful of physiological arousal are a particularly "at-risk" population for poor asthma outcomes because of this greater reactivity and could benefit from interventions targeting anxiety sensitivity.

<http://bmo.sagepub.com/content/early/2015/09/23/0145445515607047.abstract>

Momentary assessment of psychosocial stressors, context, and asthma symptoms in Hispanic adolescents

Dunton G, Dzubar E, Li M, Huh J, Intille S, McConnell R.
February 2, 2016

The current study used a novel real-time data capture strategy, ecological momentary assessment (EMA), to examine whether within-day variability in stress and context leads to exacerbations in asthma symptomatology in the everyday lives of ethnic minority adolescents.

Low-income Hispanic adolescents with chronic asthma completed 7 days of EMA on smartphones, with an average of five assessments per day during non-school time. EMA surveys queried about where (e.g., home, outdoors) and with whom (e.g., alone, with friends) participants were at the time of the prompt. EMA surveys also assessed over the past few hours whether participants had experienced specific stressors (e.g., being teased, arguing with anyone), asthma symptoms (e.g., wheezing, coughing), or used an asthma inhaler. Multilevel models tested the independent relations of specific stressors and context to subsequent asthma symptoms adjusting for age, gender, and chronological day in the study.

Being outdoors, experiencing disagreements with parents, teasing, and arguing were associated with more severe self-reported asthma symptoms in the next few hours. Being alone and having too much to do were unrelated to the experience of subsequent self-reported asthma symptoms. Using a novel real-time data capture strategy, results provide preliminary evidence that being outdoors and experiencing social stressors may induce asthma symptoms in low-income Hispanic children and adolescents with chronic asthma.

The results of this preliminary study can serve as a basis for larger epidemiological and intervention studies.

<http://bmo.sagepub.com/content/early/2015/09/30/0145445515608145.abstract>

**Associations Between Parental Health Literacy, Use of Asthma Management Plans, and Child's Asthma Control.
(Clinical Pediatrics)**

Brigham EL, Goldenberg L, Stolfi A, Mueller GA, Forbis SG.

Aim

To assess the associations between parental health literacy (HL), parental ability to use a written asthma management plan (WAMP), and child's asthma control.

Methods

Parents completed a survey with questions related to WAMPs and child's asthma, a HL screening tool, and 5 asthma vignettes.

Results

A total of 176 surveys were included. Of respondents' children, 38% had not well/poorly controlled asthma. In multiple regression analysis controlling for education level, limited HL was significantly associated with WAMP. WAMP score was not associated with asthma control. Limited HL was associated with poor asthma control in univariate analysis, but not in a logistic regression model controlling for other significant variables. Only unmarried marital status with asthma control.

Conclusion

HL is associated with parental ability to use WAMPs to respond to asthma scenarios. Parental HL may play a role in parents' ability to appropriately use WAMPs.

<http://www.ncbi.nlm.nih.gov/pubmed/25994320>

Impact of psychiatric illness upon patients' health care utilization and illness control. Are all psychiatric comorbidities created equal?

Pilipenko N, Karekla M, Georgiou A, Feldman J.
January 19, 2016

The impact of psychiatric illnesses upon asthma patients' functioning is not well understood. This

study examined the impact of psychiatric comorbidity upon illness management in asthma patients using empirically-derived psychiatric comorbidity groups.

Participants were a clinic sample of Greek-speaking asthma patients (N = 212) assessed using the Patient Health Questionnaire (PHQ) Somatoform, Depression, Panic Disorder (PD), Other Anxiety Disorder, Eating Disorder (ED) and Alcohol sub-scales. The associations between sub-scales were examined using multiway frequency analysis. The following groups were derived: Somatoform disorder and/or Any Depressive disorder, Somatoform disorder and/or Other Anxiety disorder, Somatoform disorder and/or Any ED, and Any Anxiety group including PD and/or Other Anxiety disorder.

Across all groups, psychiatric illness was associated with significantly worse asthma control. Participants in Any Anxiety group, Somatoform and/or Any Depressive disorder, and Somatoform and/or Other Anxiety disorder, were at higher risk for asthma-related Emergency Room (ER) visits compared to controls. However only Somatoform and/or Any Depressive disorder, Somatoform and/or Other Anxiety disorder, and Somatoform and/or Any ED, group membership were risk factors for asthma-related hospitalizations.

Results suggest that while comorbid psychiatric disorders generally negatively impact asthma illness management, different psychiatric comorbidities appear to have disparate effects upon illness management outcomes.

<http://www.ncbi.nlm.nih.gov/pubmed/26782700>

Comparison of secondhand smoke exposure in minority and nonminority children with asthma

Fedle DA, Tooley E, Busch A, McQuaid EL, Hammond SK, Borrelli B.
February 2016

Objective

This study determined if secondhand smoke (SHS) exposure is related to asthma-related functional morbidity by examining racial/ethnic differences in non-Latino White (NLW), African American, and Latino families and whether racial/ethnic SHS exposure differences across families persist when accounting for smoking factors.

Methods

Participants were 305 caregiver smokers of children with asthma. Two passive dosimeters measured secondhand smoke: one in the home and one worn by the child.

Results

Higher SHS exposure was related to greater asthma-related functional morbidity. African Americans had higher levels of home SHS exposure than did Latinos or NLWs. SHS exposure as assessed by the child-worn dosimeter did not differ across race/ethnicity. African American families were less likely to report a household smoking ban compared to Latinos and NLWs. African Americans were less likely to report having two or more smokers in the home compared to NLWs. NLWs reported the highest number of cigarettes smoked daily compared to Latinos and African Americans. SHS home exposure levels were regressed on race/ethnicity and relevant covariates. Household smoking ban and only one smoker in the home were associated with lower levels of SHS in the home; race/ethnicity was not significant.

Conclusions

Differences in SHS exposure across race/ethnicity exist among children with asthma, possibly due to differential presence of a household smoking ban and number of smokers in the home.

<http://www.ncbi.nlm.nih.gov/pubmed/26237117>

In utero exposure to pets is associated with asthma and wheezing in Mexican American children

Eldeorawi K, Kunzweiler C, Combs AMT, Persky VW.
January 21, 2016

Objective

To examine the associations of in utero and early life exposure to cats/dogs and birds with the risk of lifetime doctor-diagnosed asthma and other respiratory conditions in a sample of Mexican American (MA) children 4-18 years of age.

Methods

This study is a population-based cross-sectional investigation of 1816 MA children. We conducted multiple logistic models examining the relationship of asthma and wheezing with exposures to cats/dogs and birds in utero, infancy and at the time of the survey adjusted for country of birth, family history of asthma/allergies, antibiotics use in infancy and other covariates.

Results

In adjusted analyses, in utero exposure to cats/dogs and birds jointly was associated with increased odds of asthma, ever wheezing and current exercise-induced wheezing compared to children not exposed to these pets in utero. Children who were exposed to both cats/dogs and birds in utero had an elevated, albeit statistically non-significant, odds of current wheezing. Exposures in infancy and at the time of the survey to cats/dogs and birds were not associated with asthma or wheezing.

Conclusions

In utero exposure to pets might be associated with an increased risk of asthma and respiratory conditions in a sample of non-affluent MA children.

<http://www.ncbi.nlm.nih.gov/pubmed/26797097>

Predicting future emergency department visits and hospitalizations for asthma using the Pediatric Asthma Control and Communication Instrument - Emergency Department version (PACCI-ED)

Wu DJ, Hipolito E, Bilderback A, Okelo SO, Garro A.
January 22, 2016

Objective

Emergency departments (EDs) are potential settings for interventions to improve asthma outcomes. Screening tools can identify children at risk of future morbidity. Our objective was to

determine the predictive validity of the Pediatric Asthma Control and Communication Instrument - Emergency Department version (PACCI-ED) for future asthma-related ED visits and hospitalizations.

Methods

This was a retrospective cohort study of 108 children 1-17 years old who visited an ED for asthma and completed the PACCI-ED. The PACCI-ED queries parents about prior 12-month ED visits, hospitalizations, steroid use, perceived asthma morbidity and burden, and asthma control (over prior 1-2 weeks). The primary outcome was subsequent ED visits and hospitalizations within 1 year of enrollment. Poisson regression was used to model PACCI-ED questions for future ED visits controlling for age and socioeconomic status.

Results

Reported ED visits predicted future ED visits but not future hospitalizations. Reported hospitalizations predicted future ED visits and hospitalizations. The remaining PACCI-ED questions did not predict future ED visits or hospitalizations.

Conclusions

The PACCI-ED risk domain was the only domain that predicted future asthma ED visits and hospitalizations. Questions about previous ED visits and hospitalizations are the most effective questions when screening children with asthma in EDs for the risk of future health-care use.

<http://www.ncbi.nlm.nih.gov/pubmed/26667853>

Racial disparity in the association between body mass index and self-reported asthma in children: a population-based study

Joseph M, Elliot M, Zelicoff A, Qian Z, Trevathan E, Chang JJ
January 20, 2016

Objective

To examine the racial disparity in the association between obesity and asthma in US children and adolescents.

Methods

This study was based on a nationally representative, random-digit-dial sample of US households with children less than 18 years of age from the National Survey of Children's Health in 2011/2012 and 2007. The study sample included 88,668 children ages 10-17 with data on body mass index (BMI), parental reporting of asthma diagnosis, and potential confounders. Multiple logistic regression analysis was performed to estimate the crude and adjusted odds ratios stratified by child race/ethnicity.

Results

The prevalence of overweight was 15.2% and obesity was 14.1%. Self-reported asthma diagnosis was 16.7% in our study sample. Obese children were 51% more likely to have asthma compared to normal weight children after controlling for child's sex, child age, socioeconomic status, environmental tobacco smoke (ETS), and neighborhood conditions. Our study also shows that the strength of this association varied by race/ethnicity after stratification. Being male, being non-Hispanic Black or Multi-racial, below the Federal Poverty Level, ETS and having detracting neighborhood elements were also significantly associated with higher odds of having a self-

reported asthma diagnosis.

Conclusion

We observed a racial difference in the association between BMI and asthma in US children. Our findings have significant public health implications and may help public health practitioners to target children and adolescents at higher risk of prevention and intervention efforts.

<http://www.ncbi.nlm.nih.gov/pubmed/26787188>

Environmental exposures and family history of asthma

Sheikh SJ, Pitts K, Ryan-Wenger NA, McCoy KS, Hayes D, Jr.
January 20, 2016

Background

Asthma pathogenesis is a complex interaction of genetic, ethnic, environmental and social/life style risk factors.

Aim

The goal of this study was to identify associations, if any, in children with asthma, between environmental risk factors (exposure to second-hand tobacco smoke (SHS), pet ownership, race and a family history of asthma).

Methods

After IRB approval, from June 2011 to December 2014, 823 children with asthma were enrolled in this prospective cross sectional study. At the initial visit, families completed a questionnaire with information on family history of asthma, having a pet at home and exposure to STS by parents at home. Chi square analyses were calculated, with alpha level of significance ≤ 0.05 .

Results

History of asthma in parents, siblings or grandparents was reported by 575 patients including father and mother. Children with family history of asthma were significantly more likely to have a pet at home and exposure to STS compared to families without a history of asthma. Similarly, asthmatic children with exposure to STS were significantly more likely to have a pet at home and a family history of asthma compared to children with no STS exposure.

Conclusions

Significantly more asthmatic children with immediate relatives with a history of asthma have a pet at home and experience STS exposure compared to children without relatives with a history of asthma, suggesting association between life style choices/environmental exposures and family history of asthma.

<http://www.ncbi.nlm.nih.gov/pubmed/26786935>

Dietary factors, body weight, and screen time in US children with and without asthma

Vaccaro JA, Niego J, Huffman FG.
2016

Asthma is a chronic disease increasing in prevalence in Western cultures. Sedentary behaviors, such as television viewing, video game and computer use, have been associated with poor diet and being overweight. The extent to which these factors were associated with asthma was investigated in a representative sample of U.S. children ages 2-11 years (N = 4133).

Results showed low dietary fiber, reported being told your child was overweight by a healthcare provider, and race/ethnicity were associated with asthma; whereas, screen time, fat intake, and meals out were not associated with asthma. Implications for clinical practice and research were discussed.

<http://www.tandfonline.com/doi/abs/10.1080/02739615.2014.948165?journalCode=hchc20>

Lower Asthma Risk From Prenatal Vitamin D Unconfirmed But Supplement Isn't a Bad Idea: Experts

Staff Report
1/27/2016

Recent studies have linked vitamin D deficiency during pregnancy to increase cases of asthma in young children. However, two clinical studies published in the January 26 issue of the Journal of

the American Medical Association (JAMA) reveal that there's no evidence to prove that vitamin D can reduce the risk for asthma in young children.

WebMD reports details on the two studies conducted to establish a link in vitamin D deficiency and an increase in asthma cases among children. A team led by Dr. Hans Bisgaard of the University of Copenhagen in Denmark tracked outcomes of more than 600 pregnancies. Their children were monitored until they were three years old.

Medical Express reports that persistent wheezing was diagnosed during the first three years of life in 47 children in the vitamin D3 group (mothers were given higher levels of vitamin D3 during pregnancy). Meanwhile, the 57 children in the control group developed persistent wheezing despite getting Vitamin D supplement as required during pregnancy.

It was found that taking vitamin D supplements during pregnancy did not decrease the incidence of children developing asthma, chronic wheezing, upper and lower respiratory tract infections or autoimmune skin disorder, according to Bisgaard and his team.

Vitamin D deficiency has been linked to increasing rates of childhood asthma in Western nations. There have been speculations that Vitamin D deficiency may affect immune system development of the fetus, increasing the risk for asthma during childhood.

There were also suggestions that a low umbilical cord level of vitamin D during birth is associated with childhood asthma.

The second study included almost 900 pregnant women whose children were considered to have a high risk of developing asthma. Two groups were formed: one taking vitamin D and their prenatal

vitamin which also contains vitamin D and the other taking placebo and their prenatal vitamin. The women started taking the vitamins beginning week 10 to week 18 of their pregnancy.

It was found that 24 percent of the children whose mother took higher levels of vitamin D developed asthma or chronic wheezing. Meanwhile, 30 percent developed asthma or chronic wheezing in the other group. According to the researchers, the 6 percent difference is not considered significant.

Dr. Augusto Litonjua of Brigham and Women's Hospital in Boston, lead author of the study, said that further study is needed to fully establish the link between Vitamin D and the risk for asthma during childhood.

However, there is no harm in taking vitamin D during pregnancy. Vitamin D is essential in the development of bones during pregnancy. It also helps the immune system and wound healing.

<http://www.latinoshealth.com/articles/17465/20160127/lower-asthma-risk-prenatal-vitamin-d-unconfirmed-supplement-isnt-bad.htm>

Treating asthma and COPD require patient compliance

By Kathleen Mathieu

February 4, 2016

Prevention, lifestyle choices, environmental factors, patient education and expert medical care are among the critical issues in the fight against lung disease. Medical professionals working closely with patients comprise a fearsome adversary.

The all too present chronic obstructive pulmonary disease, or COPD, is a widespread, life-changing affliction that touches an enormous number of lives each year. Affecting many millions of Americans, this condition is the third leading cause of death in the United States. Symptoms include shortness of breath, chest tightness, coughing and sputum production.

The main reason for developing COPD is as striking as its effects. "Smoking is its most common cause," said Victor Gorloff, MD, FCCP, chief of pulmonary medicine at Holy Name Medical Center. Smoking cessation and specialized medical care are central to the treatment of COPD. While never smoking is obviously the best approach to avoiding COPD, stopping slows the progression of the disease and helps relieve symptoms.

All lung disease is not COPD, but other lung maladies can have similar symptoms. "It is sometimes difficult to distinguish one disease from another," said Dr. Gorloff. The breathing test spirometry, chest x-ray and the skills of specialized medical professionals are vital tools in the diagnosis of COPD.

A variety of treatments, including inhalers, medication and the use of oxygen may be used. The removal of irritants such as dust and noxious fumes, and vaccination against flu and pneumonia are important, too. Pulmonary rehabilitation programs, which typically include exercise, education, nutrition advice and counseling, are sometimes recommended.

Asthma, which is very common, can seem like COPD. However, there is one significant difference.

While asthma also cannot be cured, it is reversible, said Dr. Gorloff. The combination of proper care and a compliant patient is key to controlling it. "Asthma is a chronic disease that is highly treatable. Once treated, you can remain symptom-free for many years. It can flare up, or not come back at all."

Connecting the dots between the reasons for asthma and a treatment plan is essential. "There's a huge list of things that can cause asthma," said Dr. Gorloff. Certain triggers set off already inflamed airways. Smoking, noxious fumes, pet dander, second-hand smoke, pollen, mold and cockroaches are just some of the possible culprits. Temperature changes, exercise and stress can also be factors. "In most cases, you have to eliminate irritants and take medicine."

While there are numerous lung diseases, asthma and COPD are among the most familiar. COPD is an umbrella term for a group of progressive lung diseases. "COPD encompasses emphysema, chronic bronchitis and chronic obstructive asthma. Some patients can have a combination of these disease processes," said Jaclyn Chomsky, DNP, RN, FNP-C, advanced practice nurse at The Valley Hospital.

The toughest line of defense against the damaging effects of COPD is early intervention. "I think the most important message is to get screened for COPD if you have a smoking history or work exposure history," said Chomsky. Too often "the patients who need to be screened do not get screened until they have severe symptoms."

COPD is among the top reasons for patients being readmitted to a hospital within 30 days after discharge. Many of these circumstances can be avoided. Shrinking these numbers is a nationwide priority, said Chomsky, and a team at Valley is addressing this serious matter.

Educating patients and their families is a valuable part of preparing an individual with COPD to go home, she continued. The proper use of inhalers, certain breathing techniques and an awareness of the signs of developing problems all help prevent readmission. The advanced practice nurse also stresses the importance of seeing one's physician seven days after discharge, an act that reduces the likelihood of readmission. Proper evaluation for the necessity of oxygen is also part of preparing patients for their release.

Patients should take advantage of the availability of home health care, said Chomsky. Alternately, some patients choose the services of Valley's mobile health unit. The hospital's COPD Support Group and Pulmonary Rehabilitation Program are offered to assist patients in managing the condition. "I have seen people enter rehab wearing oxygen and leaving the program without needing it." And, of course, of utmost importance is its Smoking Cessation Program, which provides free patches to participants. Not just for individuals with COPD, it can provide assistance to any smoker. "Approximately half of smokers get a smoking-related disease."

It's never too late to stop smoking - there are always benefits. With the right mindset, becoming free of the ravages of smoking is possible, even in the case of individuals who have tried and failed to give up smoking multiple times, said Dr. Gorloff. "If you are really motivated, you will stop."

<http://www.northjersey.com/news/health-news/treating-asthma-copd-requires-patient-compliance-1.1505925>

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