



*Breathe Better - Live Better!®*

FALL 2013

#### MISSION STATEMENT

We improve the quality of life for children and adults who suffer from Allergy, Asthma and Immunology related illnesses.

## CAAC Welcomes New Physician, Dr. Manu Ray

Colorado Allergy and Asthma Centers is proud to welcome our newest physician, Dr. Manu Ray. Dr. Ray joins our team of 11 other physicians and will be practicing at our Castle Rock, Highlands Ranch and Lakewood locations.

Dr. Manujendra (Manu) Ray joined Colorado Allergy & Asthma Centers in August 2013. He is board certified in Internal Medicine and will soon be certified in Allergy and Immunology. Dr. Ray received his Medical degree from Kasturba Medical College at Manipal University in India. His interest in the immune system led him to the Pennsylvania State University where he received his PhD in Immunobiology. He subsequently returned to the realm of clinical medicine and completed his residency in Internal Medicine at Akron General Medical Center in Akron, Ohio and a fellowship in Allergy and Immunology at the Hospital of the University of Pennsylvania in Philadelphia. As a part of his fellowship he also trained at the Children's Hospital of Philadelphia (CHOP).

Dr. Ray is a member of the American Academy of



Allergy, Asthma and Immunology and the American College of Allergy, Asthma and Immunology. He served as Clinical Instructor of Internal Medicine at Northeastern Ohio Universities College of Medicine (now NEOMED) from 2009 to 2011 and has been recognized for excellence in teaching. He brings with him extensive research experience and is published in numerous peer-reviewed journals. At the University of Pennsylvania he trained under some of the leading experts in the fields of Allergy and Immune deficiency.

Dr. Ray continues to strive for excellence over both the basic science and clinical aspects of Allergy and Immunology, and

believes in innovative and cost-effective medical care tailored to the needs of the individual patient. He enjoys seeing children of all ages and adults in the clinic.

Dr. Ray and his wife love the outdoors and hiking and look forward to exploring the great Rockies. His main athletic endeavor at present is chasing after his 2 year old daughter!

Find additional information on our website: [www.coloradoallergy.com](http://www.coloradoallergy.com)

Support Groups • Current Drug Studies • News Articles • Providers • New Patient Forms • Patient Education  
Flu Information • Allergy Injections • Appointment Information • Pollen Counts • Follow us on Facebook

# STOCK EPINEPHRINE AUTO-INJECTORS IN SCHOOLS COULD SAVE LIVES

By: John M. James, M.D., Grant C. Olson, M.D. & Julie Rugg, R.N.

On January 2, 2012, seven-year-old Amaria Johnson of Chesterfield, Virginia died of an accidental peanut ingestion. She was on the playground at Hopkins Elementary when a friend shared her snack. Amaria had a known peanut allergy, but her family had not provided life saving epinephrine to the school. This tragedy sparked national media attention around the topic of food allergy and how schools and school systems deal with this issue.

Food allergies are on the rise and there are currently no cures for this disease that affects millions. In fact, roughly 15 million Americans suffer from food allergies, 6 million of these being children. Approximately 90% of true food allergies are caused by peanut, egg, milk, wheat, tree nuts, soy, fish and shellfish. Ingesting a food to which you are allergic can result in anaphylaxis which is a severe potentially life threatening allergic reaction. Epinephrine is the drug of choice for treating anaphylaxis and rapid administration can save a life.

Many states have passed or are in the process of passing legislation to allow schools, both public and

private, to stock epinephrine for general use. Thirty percent of school aged children have their first episode of anaphylaxis while at school.

In February of this year, Representative Diane Primavera, introduced Colorado House Bill 13-1171 to the Colorado House of Representatives. In summary, the bill allows that the "governing authority of public and nonpublic schools may adopt a policy to authorize the school nurse or other designated school personnel to administer an epinephrine auto-injector to any student that the school nurse or designated school personnel in good faith believes is experiencing anaphylaxis, regardless of whether the student has a prescription for an epinephrine auto-injector. The bill limits the liability of schools and a good-faith user of an epinephrine auto-injector in emergency situations in school settings".

On May 28, 2013, Governor John Hickenlooper signed Colorado House Bill 13-1171 into law. Advocates of this bill see this as an opportunity to have the ability to provide life saving medication to anyone in the school setting. Opponents question the

source of funding to supply and replace the medication, as well as possible unforeseen consequences. Colorado schools have until mid-December to implement this law.

Families of CAAC patients known to have serious allergic reactions or a history of anaphylaxis will continue to work with their respective schools on providing epinephrine auto-injectors just as they have done in the past. Companies that manufacture epinephrine auto-injectors have indicated an interest in working with the school systems to supply the general-use devices and avid education programs for school personnel for recognizing, assessing and initiating action plans and treatment for these devastating reactions. Our hope is that tragedies like the one that befell Amaria Johnson will be prevented.

If you have further questions or concerns about this issue, please contact your nearest CAAC office.

Source: Food Allergy Research & Education

## CONGRATULATIONS CAAC's 2013 Founder's Award Scholarship Winners!!!!

Each year the physicians of Colorado Allergy and Asthma Centers, PC offer four \$1,000 scholarships to our patients. These scholarships are intended to honor our Founding Fathers, Sanford Avner, MD, Jerome Buckley, MD, John Selner, MD, and David Pearlman, MD. The eligibility requirements include graduating high school seniors and college undergraduates or graduate students who are in good academic standing and have been accepted by or are currently enrolled in an accredited U.S. college. Applicants must have been a patient of CAAC, PC for at least one year, must have had a visit with our practice within the last year and must be a U.S. Citizen.

Through these scholarships CAAC hopes to help the many families seen in our clinics every year. It is one of the ways we enjoy giving back to our community.



### Grace Mitsuye Farley

is a 2013 graduate of Poudre High School's International Baccalaureate program. Grace was a member of the varsity tennis team and the Ocean Science Bowl Team. She plays the flute and piano and enjoys drawing and painting. She will attend Swarthmore College where she will study Biology as an undergraduate and will then pursue a graduate degree in Marine Biology. Grace is a patient of Dr. James at our Ft. Collins location.



### Alyse Michelle Miller

graduated from Smoky Hill High School this spring as an AP Scholar. She participated in many activities during her high school career, including National Honor Society, LINK Crew, Student Government and Special Olympics volunteer. During her senior year she served as the Student Body Secretary. In addition, Alyse was a dedicated swimmer and three-year letter winner, state qualifier, team record holder and National All-American qualifier. She will attend Texas Christian University where she will study Business. Alyse is a patient of Dr. Greas at our Centennial location.

is currently a sophomore at Colorado School of Mines. He resides in the Biomedical Engineering Department where he thoroughly enjoys studying about the human body, its multitude of functions and how they all incorporate synergistically to support a living, fully functioning individual. He hopes to eventually attend medical school. He is an ACE-Certified personal trainer and competes in powerlifting and Strongman competitions. He is determined to live a life of fulfillment and zeal and believes that if your intentions are true and your heart is set, the path taken will always be the right one. Tyler is a patient of Dr. Olson at our Lakewood location.

### Meredith Christine Lutz

graduated from Arapahoe High School as a National AP Scholar with a 4.3 GPA. She plays the flute and piccolo and was a member of the Arapahoe Band Program where she participated in a variety of ensembles, including marching band, wind ensemble and pit orchestra. During her senior year Meredith served as the flute section leader. Aside from band she enjoyed participating in National Science Bowl, working as the team captain during her entire high school career. She will attend Bucknell University where she will major in Animal Behavior and hopes to pursue a PhD in the same field. Meredith is a patient of Dr. Adinoff at our Highlands Ranch location.



### Tyler Anthony Finamore



# Sick to Your Stomach?

## Food Allergy-Related GI Conditions &

## How an Allergist Can Help *By John M. James, M.D.*

DOCTOR'S



C  
O  
R  
N  
E  
R

While skin and respiratory symptoms are common manifestations of food allergy reactions, gastrointestinal symptoms are often observed as well. Typical symptoms include nausea, vomiting, diarrhea, abdominal cramping and pain. These symptoms can raise the suspicion of possible food allergy and/or food intolerance. What are some of the more common scenarios that may prompt a referral to an allergy clinic? This article summarizes some of the common clinical conditions that can be evaluated and managed by an allergy specialist.

**Food protein-induced enterocolitis syndrome (FPIES)** is a non-IgE mediated food allergy that primarily presents in infancy. The most common food triggers are cow's milk and soy formulas, although solid foods (eg, grains, poultry) can trigger this as well. FPIES manifests as a delayed reaction (i.e. 2-3 hours) with profuse, repetitive vomiting, often with diarrhea, leading to dehydration and lethargy in the acute setting, or weight loss and failure to thrive in a chronic form. The diagnosis of FPIES is based upon the history, constellation of typical clinical symptoms with clinical improvement following withdrawal of the suspected causal protein, exclusion of other etiologies, and, if necessary, results of an oral food challenge (OFC). Skin prick testing and serum food-specific IgE are usually negative in this disease. A decrease in blood pressure and/or an elevated white cell count with a left shift support this diagnosis. Patients with FPIES do not present with a fever or respiratory symptoms and typically recover rapidly with vigorous rehydration alone. The differential diagnosis of FPIES includes other allergic food disorders, infectious diseases, intestinal obstruction due to anatomic or functional etiologies, severe gastroesophageal reflux disease and metabolic diseases. A number of other gastrointestinal conditions may lead to severe projectile emesis (eg, pyloric stenosis), chronic emesis with poor weight gain (eg, gastroesophageal reflux disease), or abdominal distension, severe emesis, and failure to thrive (eg, Hirschsprung disease). In contrast to FPIES, there is no history of recurrence of symptoms upon food re-exposure. The initial management of FPIES consists of elimination of the offending food from the diet and an emergency treatment plan for acute episodes due to accidental exposures. Cow's milk and soy FPIES resolve in a majority of patients by age three years. The recommended frequency of oral rechallenges to determine resolution of disease is uncertain, but typically 18 to 24 months.

**This article summarizes some of the of common clinical conditions that can be evaluated and managed by an allergy specialist.**

**Allergic proctocolitis** is a benign transient condition that typically begins in the first few months of life with blood-streaked stools. These infants are well-appearing and thriving, unlike the typical infant with FPIES. Over half of infants with proctocolitis are exclusively breastfed. Mild anemia may be present. Eosinophilic infiltration of colonic biopsies is prominent and peripheral blood eosinophilia is occasionally seen. Cow's milk and soy are the most common food proteins implicated in this non-IgE mediated condition. Skin prick testing and serum food-specific IgE are usually negative in these conditions.

**Food protein-induced enteropathy** is a syndrome of small bowel injury causing malabsorption, intermittent vomiting, diarrhea, failure to thrive, and rarely, bloody stools. It is similar to celiac disease, although less severe. These infants are usually formula-fed. Anemia may be present. As with allergic proctocolitis, cow's milk and soy are the most common food proteins implicated in this non-IgE mediated condition. Skin prick testing and serum food-specific IgE are usually negative in these conditions.

### **Eosinophilic esophagitis (EoE) and eosinophilic gastroenteritis**

are commonly evaluated by the allergy specialist. Sensitization to food allergens is more common in the eosinophilic GI disorders than in FPIES, with about half of patients having detectable food-specific IgE antibodies. Disease onset ranges from a few days of age to adulthood. Symptoms are usually chronic, evolving over days to weeks following food exposure, and may include nausea, vomiting, poor appetite, abdominal pain and diarrhea with blood or mucus. The course is insidious, chronic, and not characterized by acute episodes of severe, repetitive vomiting or lethargy. Difficulty swallowing and food impaction may be the presenting symptom in teenagers and adults with EoE.

Eosinophilic esophagitis should be considered in patients with persistent dysphagia, or with gastroesophageal reflux disease (GERD) that fails to respond to medical therapy. In children, symptoms that may be associated with eosinophilic esophagitis vary by age and include feeding disorders, vomiting, abdominal pain, dysphagia, and food impaction. In particular, the diagnosis should be considered in young men or boys, and in those with a history of food or environmental allergies and asthma. A history of esophageal perforation or severe pain after dilation of a stricture should also raise suspicion of this disorder. Making a diagnosis of eosinophilic esophagitis requires the presence of both symptoms and histologic findings. In addition, other disorders that can cause esophageal eosinophilia, such as GERD, should be ruled out. In patients suspected of

having eosinophilic esophagitis, the first diagnostic test is typically an upper endoscopy with esophageal biopsies, following two months of treatment with a proton pump inhibitor, though radiographic and laboratory findings may support the diagnosis. Because of the strong association of eosinophilic esophagitis with allergies, we suggest that patients with eosinophilic esophagitis undergo evaluation by an allergist or immunologist. The results of the evaluation may have treatment implications (eg, elimination diets).

**Anaphylaxis with gastrointestinal symptoms** may present with acute onset of repetitive vomiting, diarrhea, and/or lethargy, usually within minutes to one to two hours following food ingestion. These clinical manifestations; however, occur in association with other symptoms that are absent in FPIES. Cardiovascular shock may develop, but unlike in FPIES, it usually ensues within minutes of exposure and is mostly responsive to treatment with intramuscular epinephrine.

**Gastroesophageal reflux disease (GERD)** and regurgitation are extremely common during infancy and typically resolve on their own by one year of age. Most infants with frequent, uncomplicated regurgitation do not require intervention or evaluation beyond a careful history and physical examination. Infants presenting with frequent regurgitation should be evaluated for the presence of warning signs suggestive of underlying pathological disease. In most cases, a careful history and physical examination will be adequate to identify these warning signs. Infants without warning signs, who feed well and are not unusually irritable, have uncomplicated GER, and not gastroesophageal reflux disease (GERD). Education and reassurance without any other specific intervention (i.e. reflux

*Continued on page four*

## Sick to Your Stomach? *Continued from page three*

medications) usually are sufficient. If the symptom is problematic for the family, treatment options include thickening of the formula or expressed breast milk, or a brief trial of eliminating cow's milk from the diet.

Infants without warning signs but with other symptoms such as poor weight gain, feeding refusal, or irritability, usually can be managed with changes in feeding patterns, thickening of feeds, positioning therapy, and a trial of a milk-free diet. The rationale for the milk-free diet is that a substantial percentage of infants with problematic reflux have an underlying intolerance to food protein (i.e. typically cow's milk). The trial is particularly important for infants with gross or occult blood in the stool, eczema, or a strong family history of atopic disease. Other diagnoses and treatments should be explored if there is not a clear response to the diet change within a few weeks. There are many causes of irritability in infants. If the history suggests a strong temporal association between episodes of irritability and reflux, a limited empiric trial of acid suppression and/or evaluation for reflux (using esophageal impedance and/or pH monitoring) or endoscopy is appropriate.

Acid suppressing medications are indicated in the following situations: 1) infants with moderate or severe esophagitis documented by endoscopic biopsies can be treated with an acid-suppressing medication for three to six months (i.e. a proton pump inhibitor (PPI). 2) infants with mild esophagitis on endoscopic biopsies, or those with significant symptoms suspected to be caused by GERD such as poor weight gain, feeding refusal, or marked irritability that is temporally associated with reflux episodes, and in whom conservative measures including milk-free diet have failed. Either a PPI or a histamine type 2 receptor antagonist (H2RA) is an appropriate choice for this short-term trial of acid suppression in this group. If these infants have an unequivocal improvement in symptoms, acid suppression may be continued for three to six months, then reevaluated. All patients treated with chronic PPIs should be periodically evaluated to determine whether ongoing treatment is necessary.

Surgical procedures to treat reflux, such as fundoplication, are rarely indicated in infants younger than one year of age. However, some children who present with reflux during infancy may ultimately require surgical management later in childhood.

## In Step with Research



Our research departments are always looking for qualified participants for allergy, asthma and COPD studies. Please call if you are interested in learning more about our clinical research department and study participation. You will be compensated for your time while on the study and receive all study medications at no charge.

If you, a friend or a family member are interested in doing a study please contact our Centennial or Denver Research office. We will be happy to talk to you regarding any of our studies. You do not have to be our patient to do a study. You do not have to have health insurance to participate in a study.



## Pumpkin Pie (Wheat-Free, Egg-Free, and Dairy-Free)

A gluten-free pie crust is filled with a spicy pumpkin filling that is dairy-free and egg-free. Serves 8.

### Crust:

- 1 1/2 cups gluten-free all purpose baking flour
- 1 teaspoon salt
- 1/2 cup vegetable oil
- 2 tablespoons french vanilla soy creamer

### Pie Filling:

- |                                  |                            |
|----------------------------------|----------------------------|
| 2 cups canned pumpkin            | 1 teaspoon ground cinnamon |
| 1 cup french vanilla soy creamer | 1/2 teaspoon ground ginger |
| 3/4 cup brown sugar              | 1/2 teaspoon ground nutmeg |
| 1/4 cup cornstarch               | 1/2 teaspoon salt          |
| 1 tablespoon dark corn syrup     | 1/8 teaspoon ground cloves |

### Directions:

1. Preheat an oven to 425 degrees F (220 degrees C).
2. Stir together all purpose gluten-free flour and 1 teaspoon salt. In a separate bowl, whisk together the vegetable oil and soy creamer until creamy. Pour oil mixture into flour mixture, stir with fork until blended. Pat the crust into the bottom and sides of a 9-inch pie pan. Bake for 15 minutes in preheated oven. Remove and set aside.
3. Decrease oven to 350 degrees F (175 degrees C). Place pumpkin, soy creamer, brown sugar, cornstarch, corn syrup, cinnamon, ginger, nutmeg, salt, and cloves in a blender. Blend until combined. Pour into prebaked pie crust. Place foil around the edges of the pie crust and bake for 60 minutes or until a knife inserted 1 inch from crust comes out clean. Cool pie on counter for 2 hours then refrigerate overnight before serving.





*Breathe Better - Live Better!®*

### PHYSICIANS:

- David S. Pearlman, M.D.
- Jerald W. Koepke, M.D.
- Allen D. Adinoff, M.D.
- Leon S. Greos, M.D.
- Grant C. Olson, M.D.
- John M. James, M.D.
- Catherine M. Van Kerckhove, M.D.
- Nan Laoprasert, M.D.
- Mark A. Ebadi, M.D.
- Katherine S. Tsai, M.D.
- Daniel J. Laszlo, M.D.
- Manujendra Ray, M.D.

### MID LEVEL PROVIDERS:

- Martha S. Steffen, P.A.-C.
- Kim B. Allsop, P.A.-C.
- Nicole A. Mezo, P.A.-C.
- Tamara Young, P.A.-C.
- Nicole R. Rae, P.A.-C.
- Sheila Wertz, P.A.-C.
- Rita Hintz, P.A.-C.
- Alicia McCown, P.A.-C.
- Lacey Stewart, N.P.-C.

## OFFICE LOCATIONS

### BRIGHTON

4700 East Bromley Lane, Suite 207, Brighton, CO 80601  
303.654.1234 / FAX: 303.654.0955

### BROOMFIELD

340 East First Ave., Suite 307, Broomfield, CO 80020  
303.428.6089 / FAX: 303.412.2141

### CASTLE ROCK

4386 Trail Boss Drive, Suite B, Castle Rock, CO 80104  
720.858.7470 / FAX: 720.733.2415

### CENTENNIAL

14000 E. Arapahoe Rd., Suite 240, Centennial, CO 80112  
303.632.3694 / FAX: 303.632.3692  
**RESEARCH:** 303.632.3646

### DENVER-LOWRY

#### ADMINISTRATIVE LOCATION

125 Rampart Way, Suite 100, Denver, CO 80230  
720.858.7600 / FAX: 720.858.7610  
**RESEARCH:** 720.858.7510

### FORT COLLINS

1136 E. Stuart St., Bldg. 3, Suite 3200, Fort Collins, CO 80525  
970.221.1681 / FAX: 970.221.0948

### GREELEY

7251 W. 20<sup>th</sup> Street, Building N, Suite One, Greeley, CO 80634  
970.356.3907 / FAX: 970.356.3825

### HIGHLANDS RANCH

9331 S. Colorado Blvd., Suite 100, Highlands Ranch, CO 80126  
303.795.8177 / FAX: 303.797.2166

### LAKESWOOD/DENVER WEST

1667 Cole Blvd., Building 19, Suite 200, Lakewood, CO 80401  
303.420.3131 / FAX: 303.420.1984

### LITTLETON/SOUTHWEST

6169 S. Balsam Way, Suite 360, Littleton, CO 80123  
303.971.0311 / FAX: 303.948.0339

Visit us on the web at: [www.coloradoallergy.com](http://www.coloradoallergy.com)

Subscribe to  
our YouTube Channel  
to get a glimpse of  
CAAC's educational videos.



*Leaders in Allergy and Asthma Care for over 40 years*