ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD) IN CHILDREN AND ADOLESCENTS WITH EPILEPSY

by Heidi A. Bender, Ph.D. and William S. MacAllister, Ph.D., ABPP-CN

What is ADHD? Attention-Deficit/Hyperactivity Disorder (ADHD) is a behaviorally-based neurodevelopmental disorder characterized by attentional difficulties that are “more frequently displayed and more severe than is typically observed in individuals at comparable levels of development.” Symptoms can be further categorized by the disorder’s predominant behavioral features, including a primarily inattentive (ADHD-Inattentive Type; ADHD-I) and hyperactive-impulsive subtypes (Attention-Deficit/Hyperactivity Disorder Predominantly Hyperactive-Impulsive Type; ADHD-H/I), as well as a mixed presentation (ADHD Combined Type; ADHD-C).

How common is ADHD in children with epilepsy? Epidemiological studies suggest that ADHD is the most common psychiatric diagnosis in child and adolescent populations, affecting approximately 4.4 million school-aged children in the U.S. In comparison, the prevalence of clinically-significant attentional impairment is considerably higher in children with epilepsy, ranging from 30-40%. The particularly high rate of attentional problems in this population is not surprising given that consistent, uninterrupted responsiveness is a prerequisite for attention. Conversely, seizure activity, by its very nature, may diminish responsiveness to external stimuli, resulting in significant behaviorally- and cognitively-based attention deficits. In children with epilepsy, attentional impairments may be caused by frequent, subclinical seizure activity, underlying neuroanatomical damage, or frontal/ temporal lobe seizure focus. In addition, treatment with certain anti epileptic drugs (AEDs), while often effective at reducing seizure frequency, may also result in side effect profiles that include attentional disturbance and reduced task vigilance. Fortunately, newer anti epileptic medications generally have far fewer cognitive side effects than did earlier generations of these medications.

How is ADHD diagnosed?: Children with suspected attentional difficulties are often referred to a neurologist or child psychiatrist for in-depth assessment. (Continued on page 3)
DR. ORRIN DEVINSKY, FOUNDER OF faces

A M E S S A G E   F R O M

The epilepsies. The word epilepsy evokes the image of a single entity, but “it” is a spectrum of disorders with a diversity spanning far across the personal and biological domains. Some cases are so mild that the individual never seeks medical attention. Others are easily controlled with a low dose of one medication. But some epilepsies are malignant, relentlessly progressing against the most aggressive therapeutic efforts. The molecular and electrochemical processes that underlie epilepsy are as complex and numerous and mysterious as the clinical disorder. One frustrating paradox stands out. While our understanding of the genetics and basic science of seizures and epilepsy has grown tremendously, and more than a dozen new drugs and other therapies are available, our ability to help the most severely affected individuals has improved very, very little.

Why the disconnect between what we know and what we do? There are many answers. First, it is easier to “do science” than “cure disease”. In medical science, there are thousands of studies published every month, but true breakthroughs in treating a disease are rare. Most advances are incremental and small. Second, the epilepsy research community is not focused on a cure or breakthrough. Indeed, research is rarely directed at advancing epilepsy therapy. Our challenge is to reconnect research funding with the needs of patients. But what are the needs of the people with epilepsy?

Many people with epilepsy find themselves in one of two very different groups with what appear to be very different priorities. Those with well-controlled seizures fear the stigma and misconceptions that surround epilepsy. The world is frightened by the word seizure and petrified of the word epilepsy. Many choose not to disclose epilepsy. Others are very open and stress that epilepsy is simply a neurological disorder – nothing to fear and nothing that limits their intellect or lives. For those with poorly-controlled seizures, epilepsy is a disorder whose prevalence and severity shout to be noticed, to be funded, to be helped. They can never escape from the dark cloud of the next seizure and the toxicity of medications. Those two faces seem to be at odds with each other – those with well-controlled seizures who are trying to blend in and become invisible and those with refractory epilepsy who are desperate to be seen.

The epilepsy community needs to find its voice. The current message is mixed and sometimes confusing, serving neither those with well-controlled nor poorly-controlled epilepsy. Stigma remains. Funding at federal and philanthropic levels are appallingly low for a disorder that affects so many, so profoundly. The epilepsies are diverse, the needs of those affected are many, but the voice must be strong and united.
These clinicians will conduct detailed interviews with a child’s parents or guardians to better assess attentional functioning both at home and at school. Parents may also be referred to a neuropsychologist for a more comprehensive assessment of their child’s cognitive, academic, and behavioral functioning. Neuropsychological test batteries typically include measures of overall intellectual functioning, academic achievement, and aspects of attentional, language, visuospatial, motor, and memory abilities. Neuropsychologists also assess the presence and severity of psychological and behavioral difficulties in more than one setting (usually at home and at school). Based on this information, an informed assessment of ADHD symptoms can be made and a diagnosis provided.

Why is early identification and treatment of ADHD necessary? Numerous studies have documented short- and long-term ramifications of this disorder. Academically, children with epilepsy and ADHD are more likely to exhibit challenges with learning and achievement (i.e., higher rates of formal Individualized Education Plans and supportive services, such as tutoring and summer school), as compared to similarly aged children with epilepsy-only. For some, real world ramifications of ADHD also persist into adulthood. Adults for whom ADHD was diagnosed in childhood have been shown to have higher rates of criminal behavior, accidents resulting in injury, substance abuse, unemployment, marital discord, and teen pregnancy. Early identification and ADHD symptom management can reduce the risk of these adverse outcomes.

Research evaluating the causes of ADHD in children with epilepsy conducted at NYU Comprehensive Epilepsy Center
Thanks to the generous support of faces, the Neuropsychology Service at NYU Comprehensive Epilepsy Center has recently initiated a study evaluating the roles of genetic and environmental risk factors on attentional disturbance in children and adolescents with epilepsy. Increased understanding of the causal nature of these factors is particularly important to populations with epilepsy due to the confounding nature of several seizure-specific variables, including location of seizure focus, degree of seizure control, age at seizure onset, and anti-epileptic drug treatment regimen. To this end, we aim to identify a subset of children with epilepsy who are at the greatest risk for developing ADHD.

We have currently enrolled and evaluated nearly 50 children in our study and are looking to recruit more volunteers in the near future. If your child is between the ages of 6 and 18 years old and has a history, of epilepsy and ADHD, epilepsy-only, or ADHD-only, then they may be eligible to participate. If you are interested, please contact Heidi Bender at 212-263-2662. We greatly appreciate all patient volunteers (and their parents) who have given their time so that we can understand more about epilepsy and ADHD.

For additional information, please consult the following sources:
Sherman EM, Slick DJ, Connolly MB, and Eyrl KL. ADHD, neurological correlates and health-related quality of life in severe pediatric epilepsy. Epilepsia 2007;48(6):1083-1091

Dr. Heidi Bender is in the third year of her postdoctoral fellowship within the Neuropsychology Service.
Dr. William MacAllister is a Pediatric Neuropsychologist at the NYU Comprehensive Epilepsy Center and is also a Clinical Assistant Professor in the Department of Neurology at NYU Langone Medical Center.

VOLUNTEER HIGHLIGHT

CLAUDIA KRELL

“I feel blessed that I was given this incredible opportunity to work on the faces brochure. As a photographer, I had the idea to use the faces of faces for the brochure cover, and that meant no stock photos allowed, just real faces volunteers who are all patients. Working with faces has shown me what community and charity work is really about. I think that because there are still so many unknowns surrounding epilepsy, the amazing faces network is an invaluable resource for those of us that live with its uncertainty. Through this project I met the most interesting and amazing people, each one with their own challenge or story related to epilepsy. I think people may underestimate the difference that they can make in helping others - whether it is stuffing envelopes or participating at events, EVERYONE can make a difference at faces!”
In March of this year, our very own Dr. Blanca Vazquez took a remarkable trip to the Ecuadorian Amazon to help treat, train and educate patients with epilepsy. With a team of other U.S. medical specialists and health care professionals, Dr. Vazquez was in the Amazon for one week and had many astounding and sobering stories to tell of the experience.

When Dr. Vazquez was asked what affected her most about the trip, she talked of the deeper understanding she now has of the stigma that epilepsy has carried for centuries, and why this condition can produce such strong, negative reactions. As she tells us, myth and folklore are extremely powerful and can severely determine the daily care and critical issues of one’s life.

The Amazon region lacks many resources in health care and patients with epilepsy might need to travel 200 miles to the capital city of Quito to see a doctor. In the small town of Tena, located five hours southeast of Quito, an American team of physicians worked with the doctors and staff of the local public hospital for one week. The team brought with them two portable EEG machines, medication and supplies, all made available free-of-charge to the patients. The Peace Corps also got involved by helping transport patients from very long distances to Tena. In one week, 475 patients with neurological problems such as epilepsy and cerebral palsy were evaluated.

The lack of access to proper diagnosis and treatment, long distances to travel, and the local population’s lack of economic resources prevent patients in the Amazon from obtaining accurate analysis, education and management of these neurological conditions. With these limitations, the power of superstition and myth take over with their own particular rationalizations of why people have seizures. As a result, epilepsy is either seen as a mental illness or a spiritual problem typically treated by the local shaman, often with such dire results as whipping or burning people to release them from possession by the devil. In fact, the number one cause of death in this region for those with epilepsy is falling into a fire pit while being exorcised for seizures.

The main focus of the mission soon became the separation of reality from myth; to decrease the gap in epilepsy treatment while increasing access to neurological care by establishing partnerships among visiting consulting neurologists, local staff and the community.

A goal such as this can only be accomplished by educating those people who are on the front lines of first aid. As Dr. Vazquez will tell you, “Sustainability of the mission is what you leave behind”. A large part of the mission, therefore, was to give educational talks on epilepsy management to local physicians, medical students, nurses and all first aid responders.

After breakfast at 7:00 a.m., Dr. Vazquez and the rest of the team would work with patients at the Center, break for lunch and then continue to meet with patients until 6 p.m. With radio as the most immediate method of communication in the Amazon, Dr. Vazquez or another member of the team would then give a radio interview asking residents to visit the Center while also discussing issues related to epilepsy. A dinner break would follow and, afterwards, the team would gather to review all the EEGs of the day and then meet with various local groups for a training workshop. This average work schedule would end no earlier than midnight.

Informing people that they should not be afraid of someone having seizures was just the beginning of the training process. Dr. Vazquez will tell you that the groups who most resisted the workshops were

(Continued on page 9)
"I LOVED THE OUTCOME" THE 2009 LEMONADE CHALLENGE

by Linda Azarian

When some people hear the word “lemonade” they may think of a cool refreshing drink or lazy summer days, but for a group of young adults there’s nothing relaxing about the word. Instead, it meant organizing a lemonade stand this summer and raising money for the Dr. Blanca Vazquez Summer Camp Scholarship Fund. This wonderful effort to provide more scholarship money for campers next year was also made by adults and parents who supported the cause and wanted to match the gifts brought in by our lemonaders – all together, more than $1,200 was raised!

The faces 2009 Lemonade Challenge showed that ingenuity and entrepreneurship are alive and well. None more so than in our Challenge winner, Lindsey A. Kloss. Lindsey, who goes to Curves in her hometown of Mansfield Center, CT, talked to the owner of the storefront and was given the okay to set up her stand right outside. Besides leaving flyers in the store, the owner went even further and encouraged Lindsey to talk to the members and tell them the reason for setting up the stand – this gave Lindsey the chance to talk about faces and the scholarship program. Lindsey picked Monday to sell lemonade as it was the gym’s busiest day of the week and, knowing her customers, sold not only regular lemonade but sugar-free lemonade as well! And it certainly helped that a laundromat was being refurbished across the street, as that brought construction workers by who purchased lemonade, water and the brownies that Lindsey made.

Selling lemonade can be a family affair and Lindsey had the help of her younger brother James who worked with her in the morning before her younger sister Jeanette came in the afternoon. Other brothers and sisters involved themselves in the Challenge and this includes both Jake and Tahne Schlesinger who each set up their own individual stands in Smithtown, NY. Jake put his stand at a nearby park and Tahne had the great idea to sell lemonade at the place of her brother’s baseball practices and games, (and thank you Jake for contributing your own money to the total you raised). In Connecticut, Mischa Krell sold lemonade with his brother Nicholas Florian and friend Joseph Magliocco – not only did they sell lemonade but also offered prizes such as two signed hockey sticks and iTunes cards at their stand! And Talia Gold made jewelry with her brother Jaret and sold their designs along with cups of lemonade in her hometown of Westfield, NJ. Kimberly Kirkland’s older brother Robert helped her sell lemonade outside their home in West Orange, NJ, but Kimberly also went to two different parks in the area to find the best location to make her sales.

When I asked Lindsey what she liked best about participating in the Challenge this year, she said that she “loved the outcome” of being able to help all the kids who will benefit by receiving a summer camp scholarship next year. In fact, Dr. Blanca Vazquez, who is Lindsey’s doctor at the NYU Comprehensive Epilepsy Center, finds it very moving to know that Lindsey has done something so meaningful for the scholarship program that bears her name.

Thank you Lindsey, Tahne, Mischa, Talia, Nicolas, Kimberly and Joseph for kicking off the faces 2009 Lemonade Challenge. And to our matching gift donors- Margot, Greg, Elizabeth, Arlene, Rory, Claudia and Roberto, Rosemary, Stephen, William and Eden–thank you for caring about the faces community. We hope to see you all again next year.
GAME DAY
October 10, 2009
Everyone needs a little break from the daily routine of life with epilepsy, and 421 children and family members experienced that break with lots of fun at Game Day! Saturday, October 10th was the 9th Annual Game Day at Chelsea Piers hosted by faces.

What a beautiful day filled with carefree smiles and laughs. How could you expect anything else with an afternoon that starts with a lollipop and gift, followed by a field house full of carnival games, and ends with a magic show by Sammie and Tudie, two very delightful clowns?

There were lots of faces painted as cats, super heros, princesses, and anything a child could imagine. After deciding what character each child wanted to be for the day, it was off to the soccer field, basketball court, tumbling gym, or rock climbing wall. And, if that wasn’t enough to keep a smile on their faces, there was a carnival with games, food, and even a race track equipped with the largest remote control cars I’ve ever seen.

Not only is this annual event a refreshing break for kids, it allows entire families to spend relaxing, uninterrupted, fun time with a community of friends experiencing similar life challenges.

Game Day was inspired by faces volunteers nine years ago as a way to bring a community together and assure them that they’re not alone, and to have a little reprieve. There are numerous volunteers who put a lot of work into making this a memorable day, but Sharon Perhac and her family really led the way in making this a fun-filled, perfect afternoon.

While it might be time to wipe off the face paint and get back to reality, remember to keep Game Day 2010 on your calendar!

By Cathie Golden
This month, I had the pleasure of meeting yet another faces volunteer, Leanne. Leanne, a Texan born and raised, now resides in New York City. She was diagnosed with epilepsy in college and had to switch her medications for many years because of their side effects. Now by effort, and also the right physician, her seizures are controlled. Leanne recognizes that she has epilepsy but neither focuses nor dwells on it. She travels often and is full of vim and vigor.

Learning of faces through the NYU Comprehensive Epilepsy Center, Leanne has now been a volunteer for several years. Amidst a career in business and preparations for her wedding, she still finds ample time to be there for the annual Gala, Lecture Series and Steering Committee meetings. I was also impressed to learn she was instrumental in organizing the 2007 Art Day. She believes eliminating the stigma of epilepsy is a driving force for her involvement with faces.

“The awareness, the education and the hope it brings, especially for the young children,” Leanne says, have captivated her. She hopes that in the future, “[faces will] continue to grow in order to bring about more awareness and education.”

Leanne attributes her present-day progress to a healthy lifestyle, consisting of adequate sleep and a proper diet, supplemented by yoga practice and group meditation. She sees her physician regularly, takes her medications and keeps up with all required neurological testing. Her many friends at faces are also very important to her.

Leanne, you are an inspiration to us all!

PATIENT’S CORNER

“AT THE CAR WASH

“My dad suggested I have a car wash to earn money and my sister said I should donate it to faces because it is the most important charity to our family. My friends even helped out because they know faces is important to me”

-Trey Miller, Age 11
TRIP TO THE AMAZON (CONTINUED):

the police and firefighters, despite the fact that they are often the first respondents called when someone has a seizure and unfortunately the least educated to its causes. Understanding the causes and conditions of epilepsy and learning how to respond to a person in an emergency situation were imperative. With the hope to ensure medical sustainability once the American team left Tena, local pediatricians and general practitioners became actively involved in the daily patient consultations and were instructed on follow-up care for patients who were started on treatment. Email contact

C ANI N E  A S S I S TA N T S
by Magie Dominic

Canine Assistants, a non-profit organization founded by Jennifer Arnold, is devoted to the training of service dogs to provide care for children and adults with physical disabilities or other special needs. Jennifer was diagnosed with multiple sclerosis as a teenager and spent two years using a wheelchair. Her father, a physician, was inspired by a California organization that trained service dogs to help people in wheelchairs and wanted to start a similar program. Tragically, three weeks after the initial planning meeting he passed away, however Jennifer and her mother carried out his efforts and worked to establish Canine Assistants in 1991.

When asked which specific skills are required for a dog that will assist a person who has seizures, Jennifer answered, “When we started placing seizure-response dogs, they didn’t have to have the same skills as our assistance dogs for people with mobility difficulties. However, we soon realized how vital such skills are for our clients who experience seizures, including retrieving, etc.”

Jennifer provided the example of how Lindsay, the canine assistant, alerts its owner to an oncoming seizure. Lindsay first noses a button to alert the owner’s friend that a seizure is forthcoming. Lindsay then runs to the kitchen to retrieve a bottle of water from the refrigerator, delivers it to the owner, then runs to the bedroom and pulls open a drawer to retrieve the medication that he or she will need. Next, Lindsay retrieves the hand-held phone and takes it to the owner. Finally, she lies down next to the owner to ride out the episode.

Jeanne Garske, a faces parent, first learned about Canine Assistants at the 2006 faces Epilepsy Conference.

She submitted an application in November, 2007, and has since been notified that her son, Chris, has been approved for an assist dog. In January 2010, they will travel to Alpharetta, Georgia to participate in a two week training camp. The purpose of camp is to match a client to his or her potential canine suitor based on a personality assessment of each, which will have been performed prior to camp. At camp, the client meets three or four dogs, primarily Golden Retrievers and Labrador Retrievers, who are selected for each client based on the recipient’s needs, lifestyle and personality, matched to the dog’s abilities, temperament and personality. Canine Assistants recommends that recipients be slightly more assertive than their dogs so they can be more easily managed. Dogs should be slightly more social than their recipients so the recipients enjoy the companionship and camaraderie of a friend. Jennifer said, “A dog may work with three people and pay very little attention to any of them, and then reach that fourth person and just melt. It’s really the dogs who choose their client.”

When Chris is having a seizure, Jeanne requests that their particular dog bark in order to alert the family. Chris has a Vagus Nerve Stimulator (VNS) that can be turned on with a magnet during a seizure, (it can be swiped over his left chest where the implant is). In this case, the dog will have a magnet in a bandana tied around his neck and will be taught to lay over Chris’ chest to activate the VNS. Jeanne looks forward to having an assist dog for Chris. “Chris will be able to go places with his dog and not always have us with him. This alone will change all of our lives. An assist dog will give Chris his freedom.”

Canine Assistants’ dogs require normal care: a safely fenced-in area or regular walks on a leash; a high quality diet; annual veterinarian evaluations; healthy weight; be well groomed, and dearly loved! There is no charge for a dog, although wait time can vary from one to five years.

I asked Jennifer how Canine Assistants has changed her own life. “I have met and fallen in love with extraordinary people and dogs here. I get to watch recipients and dogs blossom into true partners. I have learned that healing isn’t necessarily a physical process as some of the healthiest people I know are epileptics and quadriplegics. I have learned about the incredible brilliance of dogs and I realize that the gift of Canine Assistants isn’t one I have given; it is one I have received.”

Blanca R. Vazquez, M.D., is Director of Clinical Trials and Outpatient Services at the Comprehensive Epilepsy Center and an attending physician in neurology at NYU Langone Medical Center. Dr. Vazquez was the honoree of the 2009 faces Gala at which time the Dr. Blanca Vazquez Summer Camp Scholarship Program was named in her honor.
H1N1 INFLUENZA VIRUS

by Kimberly Parker-Menzer, RN, NP

2009

H1N1 influenza (flu) is a new contagious virus that is causing illness in people and spreading from person-to-person worldwide since first being detected in April, 2009. While most people who have been sick have recovered without needing medical treatment, hospitalizations and deaths from infection with this virus have occurred.

The Centers for Disease Control and Prevention (CDC) reported that, as of September 4, 2009 there have been a total of 593 deaths, 43 of those in pediatric patients. H1N1 has shown to be similar to seasonal influenza in that there are known groups of individuals who are at increased risk for complications and death from the virus. Included among these groups are children five years of age or younger and certain individuals (both children and adults) with chronic medical and immunosuppressive conditions. The CDC has recognized that neurodevelopmental conditions, such as developmental delay, epilepsy, and cerebral palsy, were the most frequently noted chronic medical conditions among pediatric deaths.

The CDC is diligently working to minimize the impact of H1N1 influenza. At a personal level, there are important things to know and do to best protect yourself or your child during the upcoming H1N1 influenza season.

Prevention is key. Spread of 2009 H1N1 virus is thought to occur in the same way that seasonal flu spreads, mainly from person-to-person through coughing or sneezing as well as by touching something with flu viruses on it and then touching one’s mouth or nose. Prevention basics include frequent hand washing, especially after sneezing or coughing, covering your mouth and nose when you sneeze, discarding tissues after use, staying home if you have a fever until it has resolved for 24 hours, (on it’s own, without use of medications that reduce fever), and avoiding people who are sick with a virus.

Presently the CDC’s Advisory Committee on Immunization Practices (ACIP) has recommended that certain groups of the population receive the 2009 H1N1 vaccine when it first becomes available. These target groups include pregnant women, people who live with or care for children younger than 6 months of age, health care and emergency medical services personnel, persons between the ages of 6 months and 24 years old, and people 25 through 64 years of age who are at higher risk for 2009 H1N1 because of chronic health disorders or compromised immune systems. Therefore, based on age alone, presently all children over 6 months are recommended to receive the 2009 H1N1 vaccine regardless of medical diagnoses. If you are over the age of 25 and have epilepsy, you may be at higher risk depending on epilepsy severity and the presence of other conditions that make someone more susceptible for complications of the virus, such as being wheelchair or bed-bound, and having breathing problems.

At the time of this writing, the vaccine for 2009 H1N1 remains in clinical trials, therefore, potential interactions with medications or considerations in special groups of individuals such as those with epilepsy have not yet been specified. There presently are no contradictions for receiving the seasonal influenza vaccine for individuals with epilepsy.

If you or your child is experiencing symptoms of H1N1, (including fever, cough, body aches, runny or stuffy nose, sore throat, chills, fatigue, nausea, vomiting, and diarrhea), contact your primary care provider or pediatrician for evaluation and recommendations. Fever reducing medications like acetaminophen or ibuprofen should be used to lower body temperature to help prevent seizures provoked by fever. If vomiting or diarrhea occurs, additional seizure medications may be required due to decreased absorption of regular medications. In such cases, contact your epilepsy doctor for recommendations. The CDC currently recommends use of the antiviral medications oseltamivir or zanamivir in patients hospitalized for H1N1, or in those individuals who are at high risk for complications from the virus. Should you become sick with H1N1, your primary care provider or pediatrician should evaluate you and initiate treatment with medication based on his/her clinical judgment of your condition.

The most up to date information on 2009 H1N1 can be found on the CDC web site. Please check regularly to help keep you and your loved ones informed and healthy this influenza (flu) season.
A n illness is a stress on the body causing an increased chance of a breakthrough seizure. When you are ill, it is important to continue to take your epilepsy medicine regularly, get plenty of sleep, keep hydrated, and allow yourself time to get better. Contact your primary care doctor for evaluation and treatment recommendations. To reduce fevers, which can cause a seizure, take the appropriate dose of acetaminophen (Tylenol) or ibuprofen (Advil or Motrin). There are many cold and cough medicines available over the counter, however their efficacy in relieving symptoms or shortening the duration of illness has not yet been established. Furthermore, some medications may carry a minimal risk of increased seizure activity. For severe symptoms that cause lack of sleep or extreme discomfort, you may choose to take one of the following: Loratadine (Claritin) for nasal congestion, Dextromethorphan (Robitussin) for cough, or Oxymetazoline (Afrin nasal spray) for nasal congestion. Avoid antihistamines (diphenhydramine / Benadryl), pseudoephedrine (Sudafed), and combination medications such as, Tylenol Cough and Cold and NyQuil, as these can increase chances of seizure activity. Don’t worry if your primary care doctor prescribes an antibiotic, as most are safe to take with seizure medications. However, Ciprofloxicin and Levaquin can provoke seizures and should be avoided if possible. Most important, keep all your doctors informed of all your current medications so as to avoid interactions. Vomiting or diarrhea may cause seizure medication levels to drop, which can increase the risk of a breakthrough seizure. A general rule of thumb for repeating doses in the event of vomiting is as follows:

- If vomiting occurs within 30 minutes of taking your pills, repeat the full dose of medication.
- Or, if vomiting occurs 30-60 minutes after taking your pills, repeat half the amount once you are able to take oral fluids without vomiting.
- If you continue to vomit or are experiencing uncontrollable diarrhea, call and speak to one of the nurses or your doctor to determine if emergency medication is needed.

And, as always, one of the most important things to remember in order to stay healthy this fall is to wash your hands multiple times a day in order to stop the spread of germs.

Most importantly, keep all your doctors and health care providers informed of all your current medications so to avoid interactions.
A Call for Ideas and Articles
Do you love to write? Do you have great ideas for our newsletter? If so, please let us know! We are currently starting to think about our spring issue. Please contact us if you have an idea for a story.

Ways to Help
If you would like to further the faces mission, you can do so by becoming a volunteer or making a donation. For more information, visit www.nyufaces.org or call (646) 558-0900.

GALA 2010
SAVE THE DATE
NYU Comprehensive Epilepsy Center
TUESDAY, MARCH 9, 2010