

SEPTEMBER– OCTOBER 2018

FOCUS ON EPILEPSY

THE NEWSLETTER OF THE EDMONTON EPILEPSY ASSOCIATION
The Epilepsy Association of Northern Alberta - Our 58th Year of Service

(This Newsletter can be viewed in full colour on our website: www.edmontonepilepsy.org)

Member Outings & Activities

September

Fun Bingo for Prizes

Friday, September 28th, 1:00—3:00 p.m.
(Pre-register by Noon, September 26th)
(Registration Limited to 12)



October

Telus World of Science

Sunday, October 14th, 1:00-4:00 p.m.
(Pre-register by Noon, October 10th)

Fun Bingo for Prizes

Friday, October 26th 1:00 – 3:00 pm
(Pre-register by Noon, October 24th)
(Registration Limited to 12)



FREE MEMBER ACTIVITY

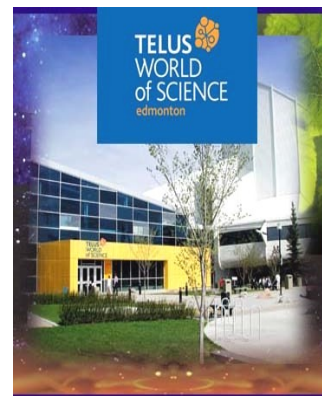
Telus World of Science

Sunday, October 14th, 2018 1:00 - 4:00 pm

Meet inside lobby

11211 142 Street, Edmonton

(Register by Noon, October 10th)



Change in Date of Garage Sale

The garage sale dates have been changed to September 21st and 22nd in order to ensure we have enough volunteers.

**GARAGE
SALE**

Annual EEA Fall Garage Sale

Sale Hours are:

Friday, September 21st,

10:00 a.m.—7:00 p.m.

Saturday, September 22nd,

9:00 a.m.—5:00 p.m.

Annual Christmas Lunch and Social

Sunday, December 9th, 12 – 3 p.m.

Huma Mexican Comfort Food, 9880-63rd Ave.

This is real Mexican food, which is not spicy!



In keeping with our tradition of a different ethnic theme each year, this year will have a Mexican theme.

\$15.00 per person (remainder EEA subsidized). Call the EEA office, 780-488-9600, to book your seats (pre-registration required).

Adult Support Group Schedule

(Group meets from 10:00 a.m. —12:00 p.m. in the EEA office.)

Please call the Office to advise if you will be attending.

Tuesday, Sept. 11th, 2018

Tuesday, Oct. 9th, 2018



Edmonton Epilepsy Association

The Epilepsy Association of Northern Alberta



Focus on Epilepsy is published 6 times annually by the **Edmonton Epilepsy Association**. Articles appearing in **Focus on Epilepsy** do not necessarily reflect the opinions of the Association.

We welcome your contributions:

Do you have a poem or maybe a short story (1/2 page) that you would like to share with others. Or maybe you have read a book from our library and want to share a review with others. If you would like to share your wisdom, please submit your items to Sharon at our office or e-mail her at info@edmontonepilepsy.org

BOARD OF DIRECTORS

President...Cheryl Renzenbrink
Vice President...Cameron Reid
Treasurer...Doug Griffiths
Secretary...Erin Duke
Executive Director...Gary Sampley
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Katrina Breau	Craig Heyland
Colleen Matvichuk	Tim McCallen
Joe Scalzo	Irene Szkambara
Anne Starreveld	Katrina Van Den Berg

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gary@edmontonepilepsy.org

Sharon Otto... Program Manager & Education Coordinator
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Dr. Sunny Kim... Counsellor
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Canadian
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Link to E-Action's On-line
Epilepsy Resource and
Community

Edmonton Epilepsy Association

EEA Employabilities Programs

- ⇒ Employment Counselling
 - ⇒ Assistance with Resumes
 - ⇒ In-office Skills Training
 - ⇒ Referrals to Select EEA Partners In Employability
- For Further Information contact EEA Executive Director,
Gary Sampley, 488-9600 or gary@edmontonepilepsy.org

Bus Tickets Available for Members in Reduced Circumstances

Please note that we now have our 2018 allotment of tickets available in the EEA Office. These can be accessed by MEMBERS with limited financial resources who need help getting to medical appointments, EEA events, food shopping, etc., and who do not have an ETS bus pass.

Call 780-488-9600 or drop by to pick them up.



Now you can Donate to the EEA online!

If you would like to make either a lump sum Donation or a monthly donation contribution to the Association by credit card, please visit our website, www.edmontonepilepsy.org, and click on the [Canada Helps](#) Logo. This donation program gives you the ability to instantly print off a donation receipt.





Report to Members on EEA Finances After The End of United Way Funding

In March of 2015, we were advised that we were going to be defunded by the United Way over a three year period of time, as we and several other smaller Edmonton-area organizations did not fit neatly into UW's new funding direction of "Creating Pathways Out of Poverty".

The three years are now over, and, after 57 years as a United Way Supported Agency, we are now totally on our own for finding the funding for the delivery of EEA Programs and Services. Over the three years of our Defunding, we found every cost saving that we could, deferred as much of our income that we could into our reserve fund and undertook more fundraising activities

In an average recent year, without shortchanging or cutting any of our present programs and services, it costs the Association about \$212,000 in expenses. In an average recent year, our annual revenue is about \$162,000. That leaves us about \$50,000 a year that we need to draw out of our reserve fund to cover the difference between expenses and revenue.

Our reserve fund is called "Future Years Operating Expenses". With what we now have in this fund, we can probably run the EEA for three or four more years if there is no replacement for the funds that are withdrawn. The key thing for us is to find the funds to keep our reserve fund "topped up" so that it doesn't run out of money. With the help and support of you, our MEMBERS, we will continue to do our best to maximize our income and minimize our expenses.

Your donation dollars are critical to our long-term survival. Here are some suggestions how you can donate to the EEA:

- Anytime through the CanadaHelps Link on the EEA website;
- Automatic monthly also through CanadaHelps;
- Post-dated monthly cheques given to the EEA office;
- By payroll deduction through the United Way (please note that the United Way keeps a portion of the deduction as an administrative fee. At Edmonton UW, this fee is 20% of the donated amount);
- A future donation through an insurance policy;
- A future bequest to the EEA through your will;
- Making a gift through securities, stocks, bonds, mutual funds and endowments;
- Making a gift through a charitable remainder trust or charitable gift annuities

We will be pleased to answer any questions you may have on any of these possibilities.





News from the EEA Office

Does Your Child or Teen Have Upcoming Sports, Arts, or Recreational Activities Costs?



The **Garry Hannigan Memorial Life Enhancement Scholarships for Youth**, to a maximum of \$500 each, are available for Youths of any age, up to the age of 18, to assist them in participating in Sports, Cultural or Recreational Activities that will enhance their development as individuals.

Scholarship criteria, eligibility details and the current Application Form can be downloaded from www.edmontonepilepsy.org, or a hard-copy Application can be mailed to you on request to the EEA Office, 780-488-9600.

Next EEA Computer Training Program Begins in October 2018

EEA members who wish to learn the basics of how to use a computer and have the opportunity to obtain a free computer with a flat screen monitor, keyboard and mouse package are invited to register now.

- ♦ The training program will run for four consecutive Mondays, from 1:00-2:45 p.m., commencing October 15th
- ♦ Training will use desktop computers, which each participant will receive free of charge after successfully completing all 4 sessions.
- ♦ Registration is limited to 4 participants;
- ♦ Education Coordinator, Sharon Otto, will deliver the training;
- ♦ This program is a partnership of the EEA and the United Way InKind Exchange.



Nominate your Employer as the EEA Employer of the Year



Nomination Deadline is October 1st, 2018

Do You Have Epilepsy???

Do you have a great and supportive Employer that recognizes and encourages the many contributions people with Epilepsy offer their fellow employees and workplace?

Nominate them for the 2018 Edmonton Epilepsy Association Employer of the Year Award. Contact us to find out how:

780-488-9600 or gary@edmontonepilepsy.org





News from the EEA Office



Congratulations to our 2018 EEA \$1000 Continuing Education Scholarship Winners



Pictured from left to right : Garrett Henrickson, EEA Executive Director Gary Sampley and Madison Twa. Garrett and Madison are the 2018 EEA Scholarship Winners and are receiving their \$1000 cheques from Gary Sampley.

The Epilepsy Trust is the annual sponsor of our Continuing Education Scholarships.

FRAMED PRINTS, PAINTINGS & MIRRORS NOW BEING CLEARED

This Summer, the EEA was the beneficiary of a donation of a significant number of pieces of framed artwork, paintings and mirrors, the vast majority of which were beautifully and expensively matted and framed. These items came in many size ranges and are valued in a range between \$100 and \$400 each.

To make room for our September Garage Sale, we are now clearing the last of these items for only **\$75.00** each, regardless of the size and value of the item.

Some of these items still remaining at the time of publication are pictured below.

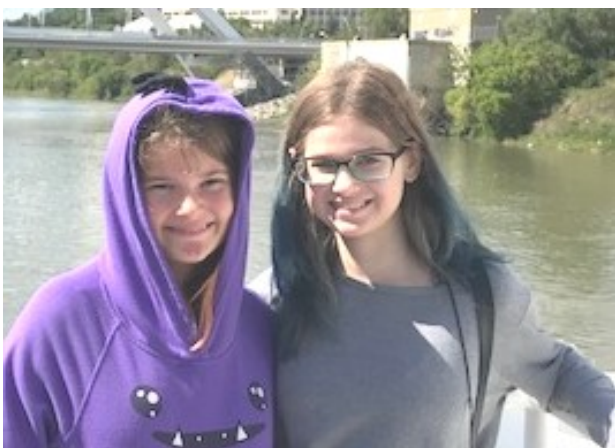
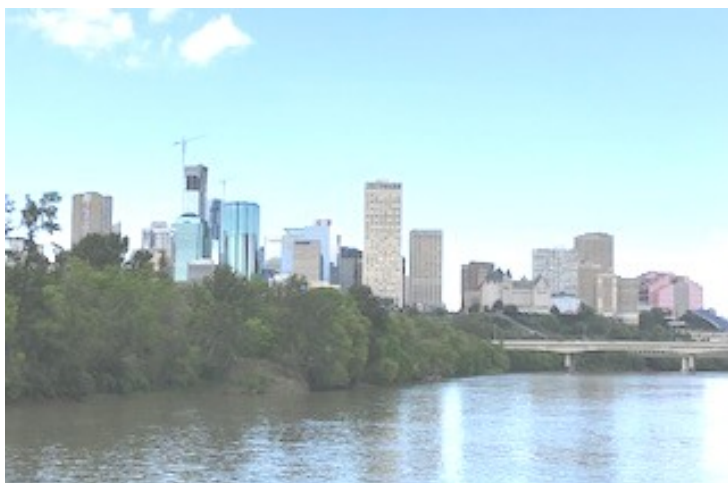
All proceeds from the sale of the artwork will be used to help the EEA deliver our numerous and diverse Programs and Services.

The items are currently located at the EEA Office, 11215 Groat Road NW. For further information, please contact the EEA Office @780-488-9600.





Edmonton River Queen





July 22nd, 2018



EEA BBQ, August 11th, 2018





Studies Unveil Hidden Ties Between Epilepsy Gene and Autism

When Abigail was 19 months old, she took a ferry with her mother Gillian across the English Channel during a move from Germany to England. On board, she played with a Belgian toddler whose mother, a doctor, took notice of Abigail's tight muscles and lack of language. (Gillian asked that we omit their last names to protect their privacy.)

"What syndrome does she have?" the doctor asked Gillian. Gillian didn't know. In the coming years, Abigail would receive diagnoses of autism and intellectual disability; she also has recurrent seizures. But it took 20 years to get an answer to the Belgian doctor's question.

In 2013, Abigail's doctor, **Meena Balasubramanian**, enrolled Abigail in **Deciphering Developmental Disorders** (DDD), a study in which researchers sequence an individual's genes to find the cause of undiagnosed genetic conditions. In Abigail, they found a de novo, or spontaneous, mutation in a known **epilepsy** gene called HNRNPU. Gillian learned of the result just last year. Over the past year, this gene has emerged as a new autism candidate associated with a neurodevelopmental syndrome. Finding the genetic cause for Abigail's condition sparked Balasubramanian's interest in the gene. She has since collected clinical information from six other people with these mutations, five of whom were identified through DDD. These participants share Abigail's learning difficulties and seizures. Together, Balasubramanian and another team have described 11 people with mutations in HNRNPU. Their findings suggest that mutations in this gene lead to a syndrome characterized by intellectual disability, seizures, distinctive facial features and, in some cases, autism. Another two studies that focused on the gene's role in epilepsy detailed 14 people with HNRNPU mutations.

A fifth study found mutations in the gene in some of the cells from two people with autism. "If you only saw one child, it wouldn't strike a bell for you," says **Hsiao-Tuan Chao**, a clinical child neurologist at Baylor College of Medicine in Houston, Texas, who has seen three children described in the second study. "But if you're able to see 10 of them, I think we could then pick them all up." Balasubramanian, meanwhile, has identified 23 more people with mutations in HNRNPU since her study's publication. She is also collaborating with clinicians in France and the United States who have identified others with the mutations.

Defined syndrome: These studies brought the gene to the attention of autism geneticists, including **Evan Eichler** and his colleagues at the University of Washington in Seattle. Eichler and his team have assembled sequencing data from more than 11,000 individuals with neurodevelopmental conditions. Earlier this year, they noticed that 11 of them have mutations in HNRNPU; 8 of these individuals were also identified by the DDD. Eichler's team has since found three new individuals with mutations in the gene.

"What's exciting is that it has come up very quickly, and so now that we have so many cases, it's going to be exciting to see what [characteristics] really stick," says **Madelyn Gillentine**, a senior research fellow in Eichler's lab.

The next step for the field is to characterize the physical features associated with autism mutations, says **Raphael Bernier**, professor of psychiatry and behavioral sciences at the University of Washington. "We're excited to do just that with HNRNPU," he says. Eichler's team is also investigating how the mutations contribute to autism. HNRNPU is involved in processing the RNA messages that encode proteins; other genes in the same family may also be involved in autism, Gillentine says.

Of the 25 people with an HNRNPU mutation described in the published studies, 5 have a diagnosis of autism. Most of these people appear to have autism features, although not all have been formally assessed. "My sense is, after talking to all the families and seeing all the kids, I think the majority are going to end up fitting the qualifications of autism," Chao says. She and her colleagues plan to study mice with mutations in HNRNPU to better understand how these mutations lead to autism and the other traits.

For Gillian, knowing more about the syndrome has helped dispel worries that she might have done something to cause Abigail's condition. "You did sort of spend a good 20 years thinking: 'That time I took the bin out in Germany and slipped on the ice, did I do anything to hurt her?'" she says. Now she knows, she says, that "there's nothing we could have done; it's just one of those things." Gillian says that since Abigail's diagnosis, she has seen Facebook posts from other families whose children have HNRNPU mutations. Everyone's experiences with the syndrome are vastly different. But looking at the photos of some of the children, Gillian says, she recognizes her daughter.

Jessica Wright

July 23rd, 2018

<https://www.spectrumnews.org/news/studies-unveil-hidden-ties-epilepsy-gene-autism/>





Doctors Found More Than 100 Tapeworm Eggs in Child's Brain After She Ate Infected Pork

An 8-year-old girl in India was plagued by seizures and pounding headaches until a CT scan revealed more than 100 tapeworm eggs had flooded her brain. Neurologists discovered the eggs, which likely traveled to her brain through her bloodstream after she consumed tapeworm-infested pork, when a particularly severe epileptic fit sent her to Artemis Hospital in Gurugram, the *Times of India* reported. Dr. Praveen Gupta, director of the hospital's neurology department, diagnosed the girl with neurocysticercosis, a parasitic infection that causes larval cysts in the brain. The disease is the leading cause of seizures and epilepsy in developing countries, a 2004 study claimed.

Neurocysticercosis is most commonly transmitted by pigs that ingest fecal waste containing the parasitic *Taenia solium*, or pork tapeworm. The worm can lay up to 50,000 eggs in a pig's stomach that travel throughout its body, parasite expert Carl Zimmer wrote for *Discover Magazine*. When the eggs become lodged in small blood vessels, they form cysts in the pig's muscles that transfer next to humans who consume undercooked infected pork. Tapeworms can survive up to 30 years in a human host's intestines, the Mayo Clinic reported, and lay eggs that form cysts in the eyes and muscles. But when the pork tapeworm larvae burrow in the ventricles of the brain, they can damage the flow of cerebrospinal fluid and cause water on the brain or worse—an often-fatal brain hernia.

Doctors were able to locate the larval cysts before they hatched in the girl's brain and killed the eggs with anthelmintic medications. Before physicians discovered the tapeworms, she was previously prescribed steroids that caused her to gain more than 40 pounds and failed to end her seizures, according to the *Times of India*. In 2014, the World Health Organization named the pork tapeworm the food-borne parasite of "greatest global concern." Eighty percent of the nearly 50 million people who suffer from epilepsy live in areas prone to parasite infestation. It's particularly common in rural farming communities of sub-Saharan Africa and Southeast Asia, where free-roaming pigs regularly come into contact with human fecal waste.

Identifying neurocysticercosis usually requires a CT scan, which can be exceptionally difficult to access (and afford) in developing countries. Treating it can be even more costly: Patients require prolonged medication and epileptic therapy, which can strain health providers with already scant resources. But the infection can halt in pigs before it's passed to humans: Fully cooking an infected cut of pork can kill the larvae, WHO said, and vets can vaccinate pigs to resist the parasite entirely. Improved sanitation in food preparation can also prevent an infected human from contaminating meat.

Scottie Andrew
July 26th, 2018

<https://www.newsweek.com/doctors-found-100-tapeworm-eggs-indian-girls-brain-1044041>

Mozart's Music Found to Ease Epileptic Seizures

A recent study performed by scientists in Edinburgh, Scotland has recently found Mozart's Sonata for Two Pianos in D major (also known as Mozart K448) to have a beneficial effect on children with epilepsy. When listened to for five minutes, the piece can actually reduce the frequency and severity of seizures. The study used control groups and other music, including songs by the Teletubbies, boy band Busted, and The Singing Kettle. None of the others had any noticeable effect.

This study was conducted at the Royal Hospital for Sick Children on 45 children aged 2-18, all of whom were undergoing EEG tests for epilepsy. About 1 out of 240 children in the UK under 16 years old have epilepsy, but between 20-40% of these cases cannot be controlled sufficiently with medication. The study was part of an ongoing effort to find additional treatments for the percentage for whom drugs don't work, and was inspired by the so-called "Mozart Effect", a term which was coined in 1993, when the same piece, Mozart K448, was found to improve student performance in spatial reasoning tests. Multiple studies have focused on this piece and improvement of epilepsy, though another Mozart sonata, K545, has been found to achieve similar effects as well.

This study is yet another step forward in the use of music in treatment for neurological challenges. Though music has long been found to possess therapeutic value and improve certain psychological conditions, such as the mood and spirit of people with stress or dementia, this study is evidence of its ability to affect purely physical conditions as well. With any luck, future research will be able to isolate exactly how the Mozart Effect works and use that knowledge devise more effective treatment for epilepsy and other neurodiversities.

Reuben Friedlander
June 19th, 2018

<http://differentbrains.org/mozarts-music-found-to-ease-epileptic-seizures/>





New Epilepsy Research at Baylor College of Medicine Provides Insight on Absence Seizures

To an observer, an epileptic seizure that involves uncontrollable jerking of the body can be frightening to witness. But there are other types of seizures associated with the neurological disorder that are quite subtle and easy to overlook.

Those subtle seizures, often referred to as absence seizures because the person experiencing it has a moment of “absence”, can be almost impossible to detect by a casual observer. The absence seizures are brief and often look like the epileptic is simply daydreaming, or lost in thought. Even those who experience the absence seizures may not be aware that it is occurring. One sign that might alert an observer is if the individual's eyes blink a lot or roll up. According to the U.S. Centers for Disease Control, approximately 3.4 million people in the United States suffer from epilepsy. Absence epilepsy is the most common type of seizure disorder in children and is the focus of a new neurology study at [Baylor College of Medicine](#) and published in the journal *Nature Communications*.

Jochen Meyer, a neuroscience instructor at the college, said that absence seizures typically stop around the time a child enters puberty in about 80 percent of the cases. The other 20 percent will continue to have seizures, he said. Meyer added that even in the cases where the absence seizures stop, absence epilepsy is still a disabling disorder because the seizures “cause children to be momentarily absent during periods of their formative years.”

Atul Maheshwari, an assistant professor of neurology and neuroscience at Baylor and a co-author of the Baylor study, said it's important to have a better understanding of how the brain is affected during an absence seizure. Maheshwari said that many of the children who experience absence epilepsy also show signs of attention deficit disorder. That can persist in about 40 percent of patients despite being treated with medication and even after the seizures stop, he said.

A better understanding of the brain is what the Baylor research team has achieved in this study. A new technology called 2-photon microscopy allowed the researchers to “visualize the firing activity of many individual neurons simultaneously in the brains of awake mice,” a Baylor release said. The new information was combined with observations made from electroencephalograms that measured the electrical patterns of the same area of the brain. The researchers said the results were completely unexpected. For years, the Baylor team said it's been known that people having an absence seizure present with an electroencephalogram shows a “spike and wave” pattern of electrical activity during the seizure. Neurology professor Jeffrey Noebels, a member of the research team, said they predicted that pattern would be a rhythmic activity. Instead, they saw “an uncoordinated firing activity,” he was a surprise.

It was always thought that during the ‘spike’ cells would fire, and during the ‘wave’ they would be quiet. That repeated pattern of spike-and-wave is the signature of this kind of epilepsy, so we assumed that it was based on the behavior of the cells that were generating the brain waves. But in fact, we found that there appears to be no uniform connection between the cell behavior and the brain waves,” Noebel said in a statement. With that new understanding of how the brain works during these seizures, the researchers said the medical community can now begin to “look for ways to treat the underlying causes of the seizures at the cellular level.”

Currently, there are several drugs on the market that are used to treat absence seizures. Among the approved treatments for absence, seizures are ethosuximide, valproic acid and lamotrigine. Earlier this year the [FDA issued a warning about lamotrigine](#), sold under the brand name Lamictal, regarding a rare drug reaction that “excessively activates the body's infection-fighting immune system.” With the Baylor result, it's possible that a new treatment will be available for those absence seizure patients

Alex Keown, July 18th, 2018

<https://www.biospace.com/article/new-epilepsy-research-at-baylor-college-of-medicine-provides-insight-on-absence-seizures/?TrackID=21#sc=emailfriend&me=email&cm=0>

Why You're Not 'Left-brained' or 'Right-brained'

It's a well-established scientific fact that each hemisphere of the brain serves different functions in the body. That fact led to the popular belief that some people are more right-brained or left-brained in their personality. However, neuroscientific research proves that this theory is entirely false.

[Dr. Jeff Anderson](#), assistant professor of radiology at the University of Utah's School of Medicine, discussed his work with “Take Care,” which proves that though each side of the brain serves separate purposes, there is no connection between personality and which side of the brain is more active. “The neuroscientific community has never believed that personality is based on dominance of one hemisphere or the other,” Anderson said. The misconception stems largely from research done in the 1960s to cure epilepsy, according to Anderson. Scientists cut the corpus callosum -- the part of the brain connecting the two hemispheres -- in several patients, resulting in a significant decrease in seizures. A side effect was that scientists could then present stimuli to one side of the brain separately from the other, which revealed small differences in hemispheric functionality. “Popular psychologists sort of just took it and ran with it, and we've kind of been in that position ever since,” Anderson said. “It's almost impossible to quash at this point, in spite of the fact that every single day, in every major medical center in the country, we have experiments that are disproving it.”

The real science that resulted from the epilepsy experiments revealed that the left side of the brain primarily processes language, while the right side largely controls attention. Anderson said each hemisphere responds to stimuli on the opposite side of the body as well.





Why You're Not 'Left-brained' or 'Right-brained' (continued)

Intrigued by this established science, Anderson focused his research on the strength of individual connections in different brain regions to hopefully develop a tool to help doctors diagnose conditions like autism and schizophrenia. The results showed that those conditions, as well as a person's personality, have nothing to do with which side of the brain is more active. "The complex personality traits -- things like creativity or pattern recognition, logic -- these are complex processes that involve the interaction of many brain regions on both sides of the brain more or less equally," Anderson said.

Anderson said that though hemispheric activity does not largely impact neurological conditions, there is evidence that those with conditions such as autism, epilepsy and schizophrenia process language in both hemispheres as opposed to the typical left hemisphere. It is still mostly processed in the left side, but the amount of right hemispheric contribution to language is higher in individuals with a whole range of different types of neurological or psychiatric conditions, according to Anderson. Left-handedness can also contribute to a different distribution of language processes, Anderson said. About 5 to 10 percent of individuals are left-handed, which can lead to having language processed on both sides of the brain or mostly on the right side instead of the left.

The most important thing to remember, Anderson said, is that though the idea of right- and left-brained personality types is a fun and tempting idea, it's not based in any scientific fact. "It's complete nonsense," Anderson said. "We love to have little games or tests that tell us something about ourselves, but it really has absolutely nothing to do with the left and the right side of the brain."

Take Care Staff

July 21st, 2018

<http://www.wrvo.org/post/why-youre-not-left-brained-or-right-brained>

Insight Without Incision: Advances in Noninvasive Brain Imaging Offers Improvements to Epilepsy Surgery

About a third of epilepsy sufferers require treatment through surgery. To check for severe epilepsy, clinicians use a surgical procedure called electrocorticography (ECoG). An ECoG maps a section of brain tissue to help clinicians identify areas damaged by seizures.

"But ECoG requires taking a part of your skull out and putting electrodes directly on brain tissue," said Professor Pulkit Grover, a professor in Carnegie Mellon University's Department of Electrical and Computer Engineering. An ECoG thus leaves a patient prone to infection. To find an alternative to ECoG, Grover's team investigated making the non-invasive electroencephalogram (EEG) more effective by increasing electrode density and improving inference algorithms. He and the team recently presented their work at the annual meeting of the American Clinical Neurophysiology Society.

Treatment of epilepsy involves scanning the brain to locate the focus of epileptic seizures. A clinician administers an EEG scan by placing a cap with electrodes attached onto a patient's head. The EEG records electrical function throughout the brain that the clinician then analyzes. EEG scans typically offer lower resolution imaging of brain activity than ECoG scans. This is a problem for EEG, since clinicians need to infer the location of focus of a seizure to perform the correct surgery. Grover's study reveals that ECoG measurements do not carry the information of depth of focus, and hence its location, accurately enough to inform good surgical planning. This agnosticism can leave a patient's illness inaccurately treated or, at worst, can reduce brain function in the operated area.

To improve EEG as a diagnostic tool, Grover, Ritesh Kumar, and Praveen Venkatesh worked on making EEG scans resolve deep brain activity with great fidelity and clarity. "The great surprise in this study," Grover remarked, "is that the non-invasive Ultra-Resolution EEG outperforms ECoG in inferring depth of focus, even though ECoG sits much closer to the brain." The Ultra-Resolution EEG modality was developed with Shawn Kelly, Marlene Behrmann, and Michael Tarr's labs, and has been validated in separate experiments.

"One big limitation is that our current results are based purely on rigorous simulations with real brain and head models," Grover emphasized, adding that his lab will pursue further experimentation with Dr. Mark Richardson at UPMC neurosurgery and Dr. Arun Antony at UPMC neurology, who also co-authored the study. Regardless, the study's conclusions are promising. Grover and his lab have potentially discovered a way for clinicians to administer accurate and thorough care to epileptic patients without needing invasive diagnostics, or at least have provided better guidance for surgical inferences.

With Behrmann, Tarr, and Kelly at CMU, Grover is also investigating how Ultra-Resolution EEG could span other topics and fields, such as brain-machine interfaces and diagnosis of brain ailments from physical injuries to migraines.

Lucas Grasha, [Carnegie Mellon University Electrical and Computer Engineering](#)

July 17, 2018

<https://medicalxpress.com/news/2018-07-insight-incision-advances-noninvasive-brain.html>





Our Programs and Services



- ◆ Free “Kids on the Block” puppet presentations that educate children (and their teachers, administrators, caregivers, and group leaders) about kids with Epilepsy in an entertaining manner;
- ◆ Free specially-tailored In-services about Epilepsy to schools, businesses, group homes, Public Service bodies, Colleges, etc. (includes annual training for NAIT EMT students and ETS Supervisors and Security Personnel, and on-line information about Epilepsy on the EPS Training System)
- ◆ Annual Epilepsy Educational Forums, both of interest to Health Care Professionals as well as the General Public;
- ◆ Free provision of our series of 12 Epilepsy Education Information booklets to Members, Hospitals, Clinics, Neurologists’ Offices and Pharmacies;
- ◆ Website, print and video information about Epilepsy, and a free lending library for members;
- ◆ Bi-monthly newsletter for Members that includes the latest current medical information available about Epilepsy, as well as current news about the Association and our services and events;
- ◆ Scholarship Program for Post-secondary Students with Epilepsy (minimum two scholarships a year);
- ◆ Garry Hannigan Memorial Life Enhancement Scholarships for Youth, to assist young people (up to the age of 18) to participate in sports, arts, cultural or recreational activities that will enhance their development as individuals;
- ◆ No-cost Counselling on Epilepsy-related problems for people with Epilepsy and families of people with Epilepsy, with referrals to other supporting Agencies as needed;
- ◆ Monthly group sessions geared toward Adults with Epilepsy and concerned family members;
- ◆ Information and support for Parents/Caregivers of Children with Epilepsy;
- ◆ No-cost provision of assistance/advice on diverse matters, including, but not limited to, finding employment, driving and Epilepsy, potential side-effects of medication, and dealing with the complexities of Government forms and applications (AISH, Disability, housing subsidy, etc);
- ◆ No-cost advocacy on behalf of people with Epilepsy experiencing discrimination or other problems;
- ◆ No-cost social and recreational activities for Members that help reduce social isolation, free ETS Bus Training, and free “Donate-a-Ride” Program bus tickets for Members in need;
- ◆ An annual no-cost in-house Collective Kitchen Cooking Training Program, An Annual Collective Gardening Program and an annual in-house Computer Training Program for Members;
- ◆ Ongoing recruitment and screening of quality Volunteers, annual recognition of all Volunteers, and annual award of Member-nominated Volunteer-, Achiever-, and Employer-of-the-Year Awards.


Edmonton Epilepsy Association

Edmonton Epilepsy Association
11215 Groat Road NW
Edmonton, AB T5M 3K2

Place address label here

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