Epilepsy and Bone Health

How is your child’s bone health?

Recent research has confirmed that adults on AED’s were at risk of lower bone mineral density with increased risk of fractures due to simple injuries. This risk was increased for those adults who started taking AED’s in childhood, explains Prof John Wark from Royal Melbourne Hospital’s Head, Bone and Mineral Service.

A crucial new research project aims to build on these findings to see if there is a difference between the bone mineral density of children – where one sibling takes AED’s and one doesn’t. Families who fit these criteria are extremely rare and are therefore encouraged to use their special characteristics to further knowledge surrounding epilepsy and bone health.

The study can also be of direct benefit to those involved as parents will be informed if their children’s test results are outside the norm in areas such as bone mineral density or vitamin D, and appropriate follow-up will be provided.

Researchers based in Melbourne are seeking 5-18 year olds with a twin and/or same-sex siblings where one child takes medication for epilepsy and the other does not, to see if those taking the AED have a lower bone mineral density. It is hoped that this research will demonstrate if this is an issue for young people, how young people on medication for epilepsy can maximise their bone health and reduce their future risk of broken bones.

For further information about this study please contact Shaie O’Brien Ph: 03 8344 0643 Email: twins-atr@unimelb.edu.au

Parents lose sleep over epilepsy

Sleep arrangements and not just night-time seizures can significantly affect the sleep of both children with epilepsy and their parents, according to research published in Epilepsia. Almost 64% of the parents who took part in the study had commenced co-sleeping after their child’s seizures started, and researchers from Massachusetts General Hospital for Children in Boston showed this was reducing their sleep quality. Almost half said they “rarely” or “never” felt rested.

For children with epilepsy, whose sleep was already likely to be disrupted by seizure activity, co-sleeping was also linked with more sleep disturbance, including night waking, being sleepy during the day, and resisting bedtime. See http://au.wiley.com/WileyCDA/PressRelease/pressReleaseld-103519.html

Epilepsy – or stress?

Stress may be causing seizures in over 33% of people thought to have intractable epilepsy. A study by America’s Johns Hopkins University School of Medicine explains these psychogenic non-epileptic seizures or PNES are actually related to stress, not abnormal electrical discharges in the brain, and researchers believe this is why antiepileptic drugs don’t help. They experience physical effects from emotional dysfunction as part of a ‘conversion’ disorder. “These patients behave as if they have an organic brain disease, but they don’t,” explained Jason Brandt, Ph.D., senior researcher of the study published online in the journal Seizure. “They’re very sensitive to stress.” See http://www.medicalnewstoday.com/articles/244145.php

First response a clue to future

The effectiveness of the first two antiepileptic medications taken could indicate how long a person’s seizures will remain uncontrolled, and also their need for alternative treatments such as surgery, or re-diagnosis. These findings from a study in Neurology analysed the outcomes of 1,098 from Scotland for up to 26 years following diagnosis. After one drug, 50% became seizure-free, while 13% did after the second. That figure dropped to 4% after the third and no-one achieved seizure freedom if the episodes persisted after eight drugs. See http://www.virtualmedicalcentre.com/news/response-to-first-anti-epileptic-drug-predicts-future-seizures/17444
Autoantibodies hold promise as drug target

Some people with epilepsy carry autoimmune antibodies against certain brain proteins. Epilepsy can be triggered if this glitch in the body’s defence system – meant to destroy harmful bacteria and other nasties – affects how the proteins function. Now the University of Oxford scientists who made this discovery are exploring whether the antibodies explain ‘idiopathic’ epilepsy (with no known cause). The three-year project funded by Epilepsy Research UK will investigate the potential role of autoimmune antibodies in adults with focal/partial epilepsies, or FEIs, where seizures start in one area of the brain. In 40% of cases, FEIs are idiopathic and a quarter do not respond to antiepileptic drugs. The hope is to uncover a new treatment target controlling seizures without the need for invasive epilepsy surgery. http://www.epilepsyresearch.org.uk/news/1206enews/P1201.htm

Brain ‘music’ the key to seizure prediction?

A ‘musical’ brainwave thought to be unique to humans may be linked to epilepsy. By continuously monitoring the brain rhythms of patients with drug-resistant epilepsy over two weeks, a research team from Newcastle University discovered a distinct, rapid increase in frequency preceding a seizure, which was similar to the ascending notes of a ‘glissando’ in music. A matching pattern was found in brain tissue samples removed from the participants during epilepsy surgery. Dr Mark Cunningham, joint research leader, said: “We want to investigate this in a larger group of patients but it may offer a promising insight into when a seizure is going to start.” See http://www.wired.co.uk/news/archive/2012-06/18/musical-brain-wave-epilepsy

Lengthy seizures linked to common childhood virus

Febrile seizures with fever are the most common seizure type. Now, research into prolonged ‘status epilepticus’ febrile seizures lasting over 30 minutes has found one third happen during infections by the common childhood virus roseola, and that those affected are at greater risk of developing temporal lobe epilepsy (TLE). The investigation is part of multi-centre study in the US exploring the consequences of febrile status epileptics. Of the 199 children being followed, 40% are expected to develop TLE within 11 or so years. According to lead study author Dr Leon Epstein, “more time is needed before the role of the virus is fully understood,” but a confirmed link between roseola and TLE would mean antiviral and anti-inflammatory therapies could be used to prevent the epilepsy occurring. http://www.sciencedaily.com/releases/2012/06/120614082623.htm

Epilepsy on Our Terms

The sub-title of this book is “Stories by Children with Seizures and Their Parents” and it brims with vivid first-person accounts from both generations. Whether your family is living with epilepsy or it affects someone else close to you, there is plenty you can learn from these honest insights detailing everything from the terror and frustration of diagnosis, to descriptions of impacts on relationships at home, school and within the community. Buy for $21 from www.amazon.com.

Things for your assistance dog!

If you have an assistance dog for your epilepsy you can fulfill their every possible need from the huge selection at www.things4yourdog.com which provides equipment specifically for service, therapy and working dogs. Items available include all sizes of service dog vests, warm coats and raincoats, saddle bags, leashes, collars, dog beds, drinking fountains and pet gates. International shipping is available from the website in America. Note the prices listed are in US dollars.

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