

# In the news

Our comprehensive rundown on the latest news and research surrounding epilepsy

## Hope for fewer seizures, side effects

AUSTRALIAN researchers are exploring a link between seizures and dynamin, a protein only found in nerve cells in the brain, to develop a more effective epilepsy therapy. Professor Phil Robinson who heads the team at Sydney's Children's Medical Research Institute (CMRI) says drugs blocking dynamin may help some of the 30% of people with uncontrolled seizures, and could also short-circuit seizures without reducing normal brain activity. Current antiepileptic drugs (AEDs) lead to "fuzzy thinking" because "they slow synaptic transmission all the time," says Robinson, who anticipates the new treatments would only dampen transmission after more than a minute, when the excessive brain

activity causing seizures had begun. Laboratory tests have isolated a number of drugs, which are now being tested on animals through the US National Institutes of Health AntiConvulsant Screening Program. If successful, they'd be trialled on humans over the next three years.

The process of getting a treatment from an idea to the pharmacy shelf "is similar to getting a shuttle into space," says Robinson. He admits chances of failure "are high," but is determined to explore other avenues for the treatment if it is initially unsuccessful. Treatments blocking dynamin may also help with mood disorders, schizophrenia and severe nerve pain. See [www.cmri.com.au/](http://www.cmri.com.au/) and click 'research' then 'cell signalling'.



"People on current medications spend their entire time with nerve communication dampened," says Professor Phil Robinson who hopes new treatments would only take effect "if the nerve was stimulated to a very high level for a period of time."

## New drug works, study claims

TESTS suggest a new drug effectively treats partial-onset seizures by opening potassium channels in the brain. While side effects of Retigabine included drowsiness, tremors and amnesia, 33% of patients on the drug's highest dose had a 50% or greater reduction in seizure frequency. They also had an average of 35% fewer seizures, compared

with 13% of patients on the placebo. That's good news for people who don't respond to current medications, said researcher Dr Roger J. Porter. Wyeth Pharmaceuticals, which developed Retigabine, sponsored the study published in *Neurology*. See [www.onhealth.com/script/main/art.asp?articlekey=80405](http://www.onhealth.com/script/main/art.asp?articlekey=80405).

## Better use for anti-dandruff compound

AN INGREDIENT used in anti-dandruff shampoos can also calm overexcited nerve cells in the brain, making it a potential epilepsy treatment, according to a US study published in *Nature Chemical Biology*. Seizures result when nerves 'fire' simultaneously and excessively in the brain - partly because of protein defects that stop potassium from exiting nerve cells and calming them. Researchers found the dandruff cure, zinc pyrithione, could turn the potassium switch on or off. "Most drug discoveries uncover chemicals that stop things from working," says co-researcher Dr Min Li. "We found a chemical that makes a defective protein work better." See: [www.jhu.edu/](http://www.jhu.edu/) and [www.nature.com/nchembio/index.html](http://www.nature.com/nchembio/index.html) and search 'epilepsy dandruff'.



## Traditional drug could lower IQ

WOMEN of childbearing age may need to avoid a commonly prescribed epilepsy medication. An American study showed the IQ of two-year-old children was an average of 12 points lower when expectant mums took Epilim or Valpro (Sodium Valproate), compared with Lamictal, Tegretol or Dilantin. Dr Kimford Meador, the University of Florida's Professor of Neurology, recommends taking the lowest dose possible if Epilim alone controls seizures, and stresses that mums-to-be should ask their doctor before changing drugs. "It can be dangerous to switch therapies mid-pregnancy," he says. See [www.medicinenet.com/script/main/art.asp?articlekey=80910](http://www.medicinenet.com/script/main/art.asp?articlekey=80910).



## Age a factor in surgery success

THE SUCCESS of epilepsy surgery – becoming the treatment of choice for intractable focal seizures – could depend on a person's age. A report published in *Pediatrics* by the Cleveland Clinic in Ohio found childhood surgery might improve developmental outcomes, with the biggest improvements noted in infants who were treated at younger ages and had infantile spasm. In spite of these positive results, the authors cautioned that early surgery may represent an unnecessary risk if the seizures can be controlled by medication later on. See [www.medscape.com/viewarticle/556265?src=mp](http://www.medscape.com/viewarticle/556265?src=mp) (free registration required).



## FYI

Most people with epilepsy know alcohol and AEDs don't mix. Now there's another reason to avoid indulging. A recent US study suggests even moderate amounts of alcohol could shrink your brain, with regular drinkers (more than 14 a week) experiencing an average 1.6 reduction in brain volume, compared with people who never drink.

## Walk and smile your way to a sharper memory

SEIZURE control and the right medication are just some ways to help reduce epilepsy's negative impact on memory. Now two US studies have associated memory with physical fitness and emotional wellbeing - and in turn, shed light on potential new strategies for enhancing your powers of recall. By exercising for one hour, four times a week, over three months, 11 volunteers at New York's Columbia University scored better

in memory tests with MRI imaging showing increased blood flow in the brain's memory centres. Meanwhile Rush University Medical Center in Chicago reported that cheerful people were less prone to developing memory problems. They found mild cognitive impairment - a form of memory loss linked with ageing - is 40 times more likely in those suffering regular anxiety and depression. See [www.onhealth.com/script/main/art.asp?articlekey=80026](http://www.onhealth.com/script/main/art.asp?articlekey=80026) and [www.abc.net.au/science/news/stories/2007/1948775.htm](http://www.abc.net.au/science/news/stories/2007/1948775.htm).



## Product picks

A cool way to store your medical details | CDs that ease your mind and body | One mum's inspiring story |

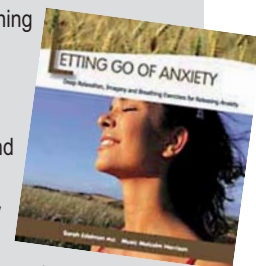
### Charmed, I'm sure

I.D. Charm Bands not only look stylish, they could save your life. The bands are designed so you can keep vital information about your medical condition close at hand, yet private, in case of emergency. You can choose which details you include and there's room for a brief step-by-step guide for dealing with your seizures until medical help arrives. All information is stored inside and can be updated as many times as you like. Ring 1300 308 524 and quote 'EPACWA' to order a Charm Band (or type this promotional code in the box at the bottom of the 'review your payment' screen on the website [www.id4me.com.au](http://www.id4me.com.au)) and Epilepsy Action will receive \$5.70 from your purchase.



### Easy listenin'

While epilepsy causes extra worries, stress may also trigger seizures. Relax with *Letting Go of Anxiety*, a CD by Dr Sarah Edelman that can help you release the physical tension, fearful thoughts and emotional uneasiness that come with anxiety. Accompanied by calming music, Edelman's soothing voice will guide you through a series of gentle exercises that include deep relaxation, restful imagery, breathing exercises and self-talk for releasing fear and promoting a sense of calm. Buy CDs for \$24.95 online at [www.holisticpage.com.au/Sarah\\_Edelman.php](http://www.holisticpage.com.au/Sarah_Edelman.php).



### Words of wisdom

"If you have a child with epilepsy or autism then you have no doubt experienced a roller coaster of emotions and uncertainty," writes Arlene Martell. Be inspired and comforted by Martell's rocky – but ultimately successful – journey in her book *Getting Adam Back*, the story of her son's struggle with epilepsy and autism. In sharing her frustration and helplessness, including the despair of drugs that don't seem to work, this Canadian mum strikes a chord with readers who have told Epilepsy Action the book helped them greatly. *Adam* is available as a hard copy or e-book. Buy online for \$27 at [www.gettingadamback.com/index.html](http://www.gettingadamback.com/index.html).