

# Yoga Moves Winter Newsletter

phone: 9486 7740  
studio address: 45 Evans Street, Shenton Park  
postal address: P.O. Box 7191, Shenton Park, 6008  
email: [usha@yogamoves.net.au](mailto:usha@yogamoves.net.au)  
website: [www.yogamoves.net.au](http://www.yogamoves.net.au)



## Winter term dates: Monday 20<sup>th</sup> July – Saturday 26<sup>th</sup> September (10 weeks)

**Timetable:** Please see the timetable for new class times and changes. Due to the final! segment of the Feldenkrais training, Usha will be only working part time during the first three weeks of term. This means that the Wednesday 11.15am class and Thursday 11.15am class will commence in week 4 of the term on 12<sup>th</sup> and 13<sup>th</sup> August respectively and run for 7 weeks. All other classes, including the new Feldenkrais class (Tuesday evenings 7.30pm – 8.45pm) will commence as usual in the week beginning July 20<sup>th</sup>. The early bird class will return in spring with the warmer weather. Deb won't be taking classes of her own next term but we will be seeing her around. Thanks Deb ☺

**New class prices:** Class prices rise at the beginning of the winter term and reflect the annual rise in operational costs. Class charges are now either casual or set packages and are non-refundable. Credit will only be given from the date a medical certificate is received. Please note the new fees and package structures below.

- **Special fees for the Wednesday 11.15am and Thursday 11.15am Feldenkrais classes for next term.** (Usha will be at the Feldenkrais training for the first three weeks of term so these two classes will start 3 weeks later than other classes on the timetable). **\$112 / \$91 concession**
- 10 classes (to be used within 10 weeks, expires 26<sup>th</sup> September) **\$160 / \$130 concession**
- 15 classes (to be used within 10 weeks, expires 26<sup>th</sup> September) **\$210 / \$165 concession**
- 20 classes (to be used within 10 weeks, expires 26<sup>th</sup> September) **\$260 / \$200 concession**
- 30 classes (to be used within 10 weeks, expires 26<sup>th</sup> September) **\$330**
- Casual classes **\$19 / \$16**

## One-to-one Feldenkrais lessons (Functional Integration) with Usha

The Feldenkrais Method is about learning by increasing awareness of our habits and developing more choices.

**What is an F.I.?** Each of us has postural and movement habits which govern the way we move and act in the world. Some of these habits serve us well, others can be problematic. In Awareness through Movement classes, a practitioner uses words to guide participants toward new or improved ways of moving. In an individual Functional Integration lesson, the practitioner uses precise touch and gentle movements to highlight current habits and suggest new experiences of ease, posture and movement efficiency. Clients are clothed and most lessons will occur lying or sitting on a low table. An individual F.I. can:

- assist in the healing process of orthopaedic injuries e.g. back or neck conditions (especially chronic or recurrent problems).
- develop body awareness and improve everyday activities like sitting, walking, lifting etc.
- be an experience of nurturing yourself with a session of meditative bodywork.

**Hours:** Commencing Monday 31<sup>st</sup> August, Mondays 12.30pm-4.30pm and Fridays 11.30am – 1.30pm. Other times may be negotiated.

**Cost:** Individual lessons with Usha are \$60 for 1 hour except first lesson which is 1 hour and 15 minutes.

**Bookings:** Please phone (9486 7740) or email ([usha@yogamoves.net.au](mailto:usha@yogamoves.net.au)) Usha to make an appointment. All lessons are given at the Yoga Moves studio.

# How the Brain Rewires Itself

Excerpt from Time Magazine Friday, January 19<sup>th</sup>, 2007.

For the full article go to <http://www.time.com/time/magazine/article/0,9171,1580438,00.html>

It was a fairly modest experiment, as these things go, with volunteers trooping into the lab at Harvard Medical School to learn and practice a little five-finger piano exercise. Neuroscientist Alvaro Pascual-Leone instructed the members of one group to play as fluidly as they could, trying to keep to the metronome's 60 beats per minute. Every day for five days, the volunteers practiced for two hours. Then they took a test.

At the end of each day's practice session, they sat beneath a coil of wire that sent a brief magnetic pulse into the motor cortex of their brain, located in a strip running from the crown of the head toward each ear. The so-called transcranial-magnetic-stimulation (TMS) test allows scientists to infer the function of neurons just beneath the coil. In the piano players, the TMS mapped how much of the motor cortex controlled the finger movements needed for the piano exercise. What the scientists found was that after a week of practice, the stretch of motor cortex devoted to these finger movements took over surrounding areas like dandelions on a suburban lawn.

The finding was in line with a growing number of discoveries at the time showing that greater use of a particular muscle causes the brain to devote more cortical real estate to it. But Pascual-Leone did not stop there. He extended the experiment by having another group of volunteers merely think about practicing the piano exercise. They played the simple piece of music in their head, holding their hands still while imagining how they would move their fingers. Then they too sat beneath the TMS coil.

When the scientists compared the TMS data on the two groups--those who actually tickled the ivories and those who only imagined doing so--they glimpsed a revolutionary idea about the brain: the ability of mere thought to alter the physical structure and function of our gray matter. For what the TMS revealed was that the region of motor cortex that controls the piano-playing fingers also expanded in the brains of volunteers who imagined playing the music--just as it had in those who actually played it.

"Mental practice resulted in a similar reorganization" of the brain, Pascual-Leone later wrote. If his results hold for other forms of movement (and there is no reason to think they don't), then mentally practicing a golf swing or a forward pass or a swimming turn could lead to mastery with less physical practice. Even more profound, the discovery showed that mental training had the power to change the physical structure of the brain.

## Overthrowing the Dogma

For decades the prevailing dogma in neuroscience was that the adult human brain is essentially immutable, hardwired, fixed in form and function, so that by the time we reach adulthood we are pretty much stuck with what we have. Yes, it can create (and lose) synapses, the connections between neurons that encode memories and learning. And it can suffer injury and degeneration. But this view held that if genes and development dictate that one cluster of neurons will process signals from the eye and another cluster will move the fingers of the right hand, then they'll do that and nothing else until the day you die. There was good reason for lavishly illustrated brain books to show the function, size and location of the brain's structures in permanent ink.

The doctrine of the unchanging human brain has had profound ramifications. For one thing, it lowered expectations about the value of rehabilitation for adults who had suffered brain damage from a stroke or about the possibility of fixing the pathological wiring that underlies psychiatric diseases. And it implied that other brain-based fixities, such as the happiness set point that, according to a growing body of research, a person returns to after the deepest tragedy or the greatest joy, are nearly unalterable.

But research in the past few years has overthrown the dogma. In its place has come the realization that the adult brain retains impressive powers of "neuroplasticity"--the ability to change its structure and function in response to experience. These aren't minor tweaks either. Something as basic as the function of the visual or auditory cortex can change as a result of a person's experience of becoming deaf or blind at a young age. Even when the brain suffers a trauma late in life, it can rezone itself like a city in a frenzy of urban renewal. If a stroke knocks out, say, the neighbourhood of motor cortex that moves the right arm, a new technique called constraint-induced movement therapy can coax next-door regions to take over the function of the damaged area. The brain can be rewired.

The first discoveries of neuroplasticity came from studies of how changes in the messages the brain receives through the senses can alter its structure and function. When no transmissions arrive from the eyes in someone who has been blind from a young age, for instance, the visual cortex can learn to hear or feel or even support verbal memory. When signals from the skin or muscles bombard the motor cortex or the somatosensory cortex (which processes touch), the brain expands the area that is wired to move, say, the fingers. In this sense, the very structure of our brain--the relative size of different regions, the strength of connections between them, even their functions--reflects the lives we have led. Like sand on a beach, the brain bears the footprints of the decisions we have made, the skills we have learned, and the actions we have taken.

