Stroke is the second greatest killer in Australia and one of the most common causes of disability

- 60,000 people a year will have a stroke
- One stroke every 10 minutes
- Stroke kills more women than breast cancer and more men than prostate cancer
- The National Stroke Foundation
A stroke is a blockage to the blood supply of the brain


- Key messages
  - 15% of strokes are ‘haemorrhagic’ – caused by a burst blood vessel
  - 85% of strokes are ‘ischaemic’ – caused by a blood clot
What does a stroke do to the brain?

The loss of blood supply from a stroke causes an area of the brain to die


- Key messages
  - Symptoms of stroke will depend on the area of the brain affected and the size of the stroke
  - The ‘core’ area will die quickly
  - Surrounding areas can survive for a short period
  - If untreated, the damage will spread outwards
What to do if you suspect a stroke

National Stroke Foundation strokesafe campaign


Key messages

- The signs of stroke will depend on which part of the brain is affected
- Think F.A.S.T.
Stroke is a medical emergency


- Key messages
  - Call 000
  - Time is brain
  - ‘clot busting’ medicine needs to be given within a few hours of stroke to be effective
A transient ischaemic attack - TIA

• When symptoms of stroke disappear within 24 hours or less

• *Warning sign of stroke and should not be ignored*

• 1 in 5 people who have a TIA will have a major stroke within 3 months, and are at most risk in the first few days after

• *Seek immediate medical attention, even if your symptoms are temporary*
Risk factors for stroke

Take the strokesafe™ test and consider your risk of stroke.

- I am over 50 years of age
- I have a family history of stroke, have heart disease or have had a stroke or TIA
- I have high blood pressure (consistently greater than 140/90) or do not know my blood pressure numbers
- I am a smoker
- I have high cholesterol (total cholesterol greater than 4.0mmol/L) or do not know my cholesterol level
- I have more than two standard alcoholic drinks per day
- I am overweight (waist over 94cm for males or 80cm for females)
- I don’t exercise regularly (30 minutes of moderate activity on most days of the week, includes brisk walk, domestic duties or leisure time)
- I don’t maintain a diet high in fruit and vegetables and low in fat, sugar and salt
- I have diabetes
- I have atrial fibrillation (irregular heart beat)

If you ticked one or more boxes, talk to your doctor and find out how you can lower your risk of stroke.

Some risk factors you cannot change

• Age
• gender (men are more likely to have a stroke)
• Family history

Many risk factors you can change

• Good management of any medical conditions
• Stop smoking reduce drinking
• Exercise and eating well
Prevention of stroke – move more

“physical activity… including walking…is associated with a substantial reduction in risk of stroke”

“brisk or striding walking pace was associated with lower risk…compared with casual pace”

Hu et al 2010 JAMA 283(22)
Prevention of stroke – sit less

“Adults who sit less throughout the day have a lower risk of early death particularly from cardiovascular disease”

“Adults may increase their health...if they sit less during the day.....regular interruptions from sitting (even as little as standing up) may help reduce your risk factors ...”

Rehabilitation after stroke is important

- 50% of people who have a stroke need rehabilitation
- 88% of stroke survivors live at home and most have a disability
- What sort of therapy you might need depends on the type of stroke you have had. Includes:
  - Physiotherapy
  - Occupational Therapy
  - Speech Therapy

Over 60 publications between us

- Optimal physiotherapy interventions after stroke
- Keeping people healthy and active after stroke
- Retraining sensory function after stroke
- Improving quality of life after stroke
- Effect of stroke on falls
- Effect of exercise on cognitive function
- Making sure everyone receives the best care after stroke
Optimising physiotherapy services

ORIGINAL ARTICLE

Circuit Class Therapy Versus Individual Physiotherapy Sessions During Inpatient Stroke Rehabilitation: A Controlled Trial

Coralie K. English, PhD, Susan L. Hillier, PhD, Kathy R. Stiller, PhD, Andrea Warden-Flood, PhD


© 2007 by the American Congress of Rehabilitation Medicine and the American Academy of Physical Medicine and Rehabilitation

Research

How much physical activity do people recovering from stroke do during physiotherapy sessions?

Tony Elson, Coralie English, Susan Hillier

Dr Susan Hillier and Dr Coralie English
Optimising physiotherapy services

Circuit class therapy trial for increasing intensity of rehabilitation after stroke

http://images.google.com
Optimising physiotherapy services

Circuit class therapy trial for increasing intensity of rehabilitation after stroke

5 days week usual care
7 days week usual care
5 days week group
Keeping people healthy after stroke

Exploring patterns of activity and sitting time of stroke survivors

- Using new technologies to explore in detail what sort of activities people are able to do at home after stroke

- Aim to improve health and well-being by encouraging stroke survivors to sit less each day, or at least break up their sitting time with short bursts of light activity

Dr Coralie English
Evidence for the retraining of sensation after stroke: a systematic review

SM Schabrun Research Centre for Human Movement Control, Discipline of Physiology, School of Molecular and Biomedical Science, The University of Adelaide and S Hillier Centre for Allied Health Evidence, School of Health Sciences, The University of South Australia, Adelaide, Australia

Received 5th July 2009; returned for revisions 19th August 2008; revised manuscript accepted 27th August 2008.

ORIGINAL ARTICLE

Sensory Retraining of the Lower Limb After Acute Stroke: A Randomized Controlled Pilot Trial

Elizabeth A. Lynch, BAppSc, Susan L. Hillier, PhD, Kathy Stüller, PhD, Rachel R. Campanella, BAppSc, Penny H. Fisher, BPhysio

Dr Susan Hillier
Improving quality of life after stroke

Becoming connected: the lived experience of yoga participation after stroke

ROBYNE GARRETT¹, MAARTEN A. IMMINK² & SUSAN HILLIER²

¹School of Education, University of South Australia, Adelaide, South Australia, Australia, and ²School of Health Science, University of South Australia, Adelaide, South Australia, Australia

Music therapy for stroke

http://www.inmagine.com/imb014/imb01413
31-photo

http://legacy.decaturdaily.com/decaturdaily/religion/050924/yoga.shtml
Aerobic Exercise to Improve Cognitive Function in Adults With Neurological Disorders: A Systematic Review

Michelle N. McDonnell, PhD, Ashleigh E. Smith, BSc, Shylie F. Mackintosh, PhD

Journal of Clinical and Experimental Neuropsychology

Assessing cognitive impairment following stroke

Michelle N. McDonnell a, Janet Bryan a c, Ashleigh E. Smith a b & Adrian J. Esterman a
Exercise to improve cognition following stroke

Can exercise improve the thinking abilities of stroke survivors?

Plasticity and Exercise

Can exercise help the brain to learn better after stroke?

Dr Michelle McDonnell
Balance Score and a History of Falls in Hospital Predict Recurrent Falls in the 6 Months Following Stroke Rehabilitation

Shylie F. Mackintosh, PhD, Keith D. Hill, PhD, Karen J. Dodd, PhD, Patricia A. Goldie, PhD, Elsie G. Culham, PhD

Study protocol

The FLASHH study: protocol for a randomised controlled trial evaluating falls prevention after stroke and two sub-studies
Frances A Batchelor*1,2, Keith D Hill1,3, Shylie F Mackintosh4, Catherine M Said5,6 and Craig H Whitehead7


Dr Shylie Mackintosh
Providing the best care for people after stroke

Journal of Multidisciplinary Healthcare

Demographic and stroke-related factors as predictors of quality of acute stroke care provided by allied health professionals

Research Letter

The effect of limited English proficiency on falls risk and falls prevention after stroke

RESEARCH ARTICLE

Patients’ age as a determinant of care received following acute stroke: A systematic review

Julie A Luker1*, Kylie Wall2, Julie Bernhardt3,4, Ian Edwards5 and Karen A Grimmer-Somers1

Julie Luker and Caroline Fryer (PhD candidates)
We would like to recognise the contributions of:
  – members of the Stroke and Rehabilitation Research group
  – all the stroke survivors, families and therapists who have participated in our trials

We are currently looking for volunteers (stroke survivors) for our research. Please contact:

Coralie.english@unisa.edu.au OR
Susan.hillier@unisa.edu.au