

Low back pain recovery slow: *and worse for those on compensation*

Contrary to current guidelines and common belief, new research has shown that recovery from low back pain is much slower than previously thought and even slower again for those with a compensable injury.

Researchers from the University of Sydney and The George Institute have proved that prognosis from acute (or recent) lower back pain is not as favourable as claimed in clinical practice guidelines. The new findings challenge the common belief that 90% of patients recover within four to six weeks, with or without treatment. The findings were recently published in *The British Medical Journal*.

"These are extremely important results because they confirm that low back pain is a significant health problem and that there is substantial room for improvement in its management," said Professor Chris Maher, Director of musculoskeletal research at The George Institute. "We found that recovery from low back pain was typically much slower than previously reported - nearly one-third of patients did not recover from the original episode within a year."

Professor Maher and colleagues studied 973 patients with acute low back pain for one year. Each was managed by their preferred clinician; a doctor, physiotherapist or chiropractor, who followed treatment guidelines established by Australia's National Health and Medical Research Council (NHMRC).

The new findings show that even with treatment, after two months only 50% had fully recovered from the original episode of pain. At one year, about 40% reported that their back was still causing them pain.



"These results challenge the accepted view that recovery is rapid following an episode of acute low back pain. For many people back pain becomes a long-term problem that severely impacts their life. This is despite receiving what we think is the best possible care. We clearly need to rethink our approach," Professor Maher added.

The strongest predictor of delayed recovery was if the episode of low back pain was compensable: compensation halved the chances of recovery. "The results also highlight that we should review our compensation system because people within this system do much worse than those outside of it."

In 2005 the additional health care expenditure due to spine problems was estimated to be US\$86 billion or 9% of USA health expenditure. Low back pain is the

most prevalent and costly musculoskeletal condition in Australia, estimated to cost up to \$1 billion per annum with indirect costs exceeding \$8 billion.

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Weight Watching in China

*Obesity is not an image that is easily conjured up when thinking of the Chinese population, but according to the most recent statistics emanating from China an estimated one-sixth of the population, or 215 million individuals, are overweight (based on the World Health Organisation's definition of overweight as having a body mass index in excess of 25 kg/m²). For a country that is traditionally viewed as having one of the leanest populations on the planet, the surge in the prevalence of overweight is largely symbolic of the country's recent economic success and the power of globalisation. Nowhere is this seen more than in the large cities such as Beijing and Shanghai where MacDonal'd's, Pizza Hut and Starbucks have become the eating places of choice for China's aspiring, and growing middle class. In this issue of *George Research*, Professor Rachel Huxley Director, Nutrition and Lifestyle Division and Professor WU Yangfeng Director, The George Institute, China, give their perspectives on obesity and China.*

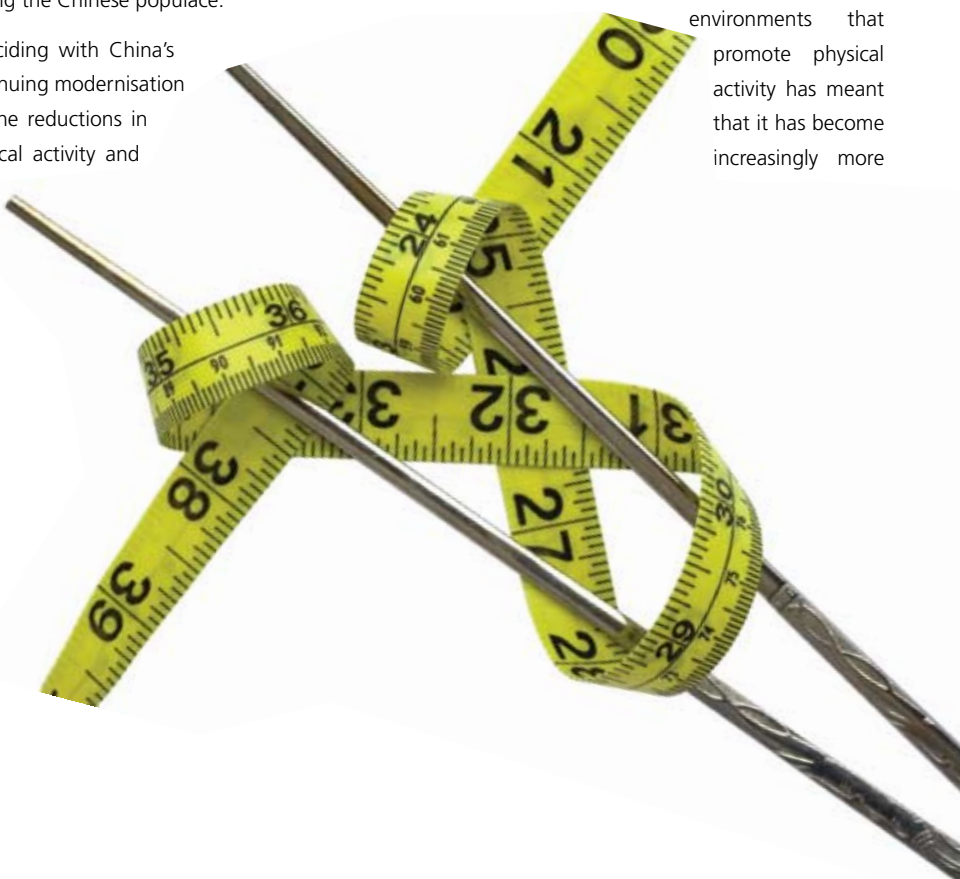
Many explanations have been proposed to explain China's recent epidemic of overweight and obesity including changes to the traditional diet, reduced levels of physical activity and increased sedentary lifestyles. Recent data from the National Surveys of Nutrition indicate that there have been noticeable changes in the proportions, and sources, of dietary macronutrients over the last 20 years; energy intake from animal sources has increased more than three-fold from 8% in 1982 to more than 25% in 2002. Moreover, the average energy intake from dietary fat among urban Chinese is approximately 35%, which is comparable to the level of dietary fat

consumption observed in Western populations, and which is significantly greater than the upper limit of 30% recommended by the World Health Organization.

Part of the explanation for the obesity epidemic in China may also have its roots in the prevailing social attitudes towards body fatness. In Chinese culture, there is still a widespread belief that excess body fat represents health and prosperity. This is perhaps a consequence of China's recent history where exposure to famine and chronic malnutrition were responsible for the deaths of millions of individuals in the past two hundred years. This attitude may partly explain the increased prevalence of overweight and obesity among older Chinese in both rural and urban areas of China. By contrast, the "Western cult of thinness" may account for the comparative resilience of young and adult urban women to the increasing trend for overweight and obesity among the Chinese populace.

Coinciding with China's continuing modernisation are the reductions in physical activity and

labour intensity not only in towns and cities but in rural areas. All over China, people are expending less energy on traditional forms of transportation, such as walking and cycling, whilst the popularity of motorized forms of transport such as cars, buses and motorcycles, is increasing. Recent studies that have examined the role of physical activity in obesity in China have found that unsurprisingly, ownership of a motorized vehicle doubles the risk of becoming obese among Chinese men compared with those that did not own a motorized vehicle. According to the National Statistics Bureau, within only a decade the number of households that owned a motorcycle rose from an average of just under two per 100 in 1990 to nearly 25 per hundred households in 2004, and although less dramatic, the average number of cars per 100 households has increased by nearly 700% to just over two. Furthermore, the lack of consideration towards constructing inner-city environments that promote physical activity has meant that it has become increasingly more



ABOUT THE AUTHOR

China is 'similar but different' to the rest of the world when it comes to cardiovascular disease, according to WU Yangfeng: "We have demonstrated that the risk factors are the same in China as in developed countries, but the solutions must be specific to China if they are to be effective, because the risk factors are rooted in its unique culture, economy, social and political environment, and public health system." While the problems are complex, the solutions should not be. He says: "My greatest interest lies in finding the practical solutions – effective, cheap, easy to use – that will suit China's specific circumstances." As well as being Director of The George Institute, China, Yangfeng is Director for the Clinical Research Programs at Peking University Health Science Center. Over the last year he has seen The George Institute, China, double its staff and greatly increase its profile; it is now collaborating with more than 200 hospitals, universities and research institutions across China.

*Professor WU Yangfeng
Director, The George Institute, China*

difficult to find safe places in residential areas in which to walk or exercise.

As in the West, China's epidemic of overweight and obesity poses a considerable public health threat, but the means to tackle the problem remain elusive. In a recent overview of randomised trials for the prevention of overweight and obesity in children and adolescents in China, none of the mainly single-pronged strategies were shown to be effective, which may, in large part, reflect a failure to appreciate the complexity of the problem

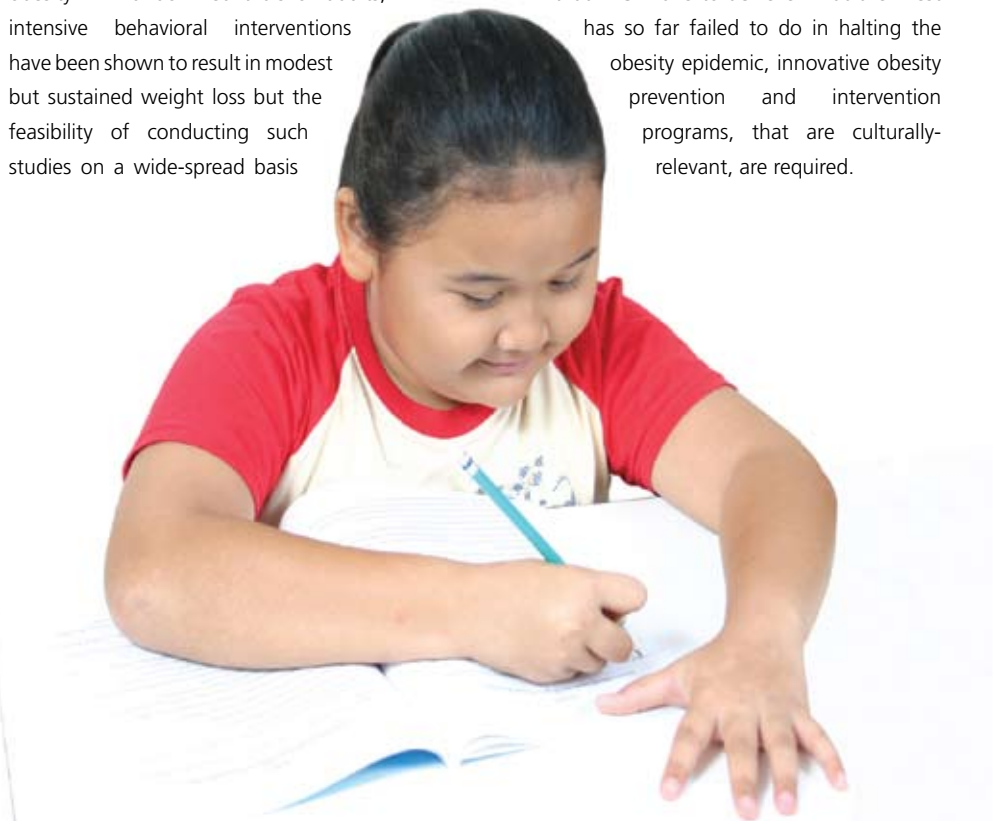
ABOUT THE AUTHOR

"What attracts me to this work is untangling fact from fiction," says Rachel Huxley. "We must distinguish, for example, whether a certain risk factor causes a disease or is merely associated with it." As Director of the Nutrition and Lifestyle Division, she takes a leading role in disseminating the findings of research in the public arena. She regularly gives talks not only to health professionals but to policy-makers, journalists and others who influence public opinion. A keen cyclist in her leisure hours, she has a particular interest in lifestyle issues such as obesity; as she puts it, "Obesity is the public health equivalent of climate change." Rachel holds a Conjoint Senior Lectureship in the Faculty of Medicine at the University of Sydney and has published widely in journals such as *The Lancet*, *The Journal of the American Medical Association (JAMA)*, *The British Medical Journal (BMJ)*, *Stroke* and *Journal of Hypertension*.

*Associate Professor Rachel Huxley
Director, Nutrition and Lifestyle Division*

and the need for a multifactorial approach that encompasses sociological factors such as education, health information availability, access to media and cultural beliefs, and other important determinants for overweight and obesity. In randomized trials of adults, intensive behavioral interventions have been shown to result in modest but sustained weight loss but the feasibility of conducting such studies on a wide-spread basis

in China is uncertain. Findings from the current study indicating a greater increase over the past decade in the prevalence of overweight and obesity in rural compared with urban areas, and among males compared with females, suggest that if China is to achieve what the West has so far failed to do in halting the obesity epidemic, innovative obesity prevention and intervention programs, that are culturally-relevant, are required.



Preventing depression after stroke

Depression is an often neglected area of stroke recovery as healthcare professionals and researchers focus on the more obvious, physical outcomes. As many individuals have difficulty acknowledging or seeking help for depression, the condition is frequently missed and poorly managed. Around 60,000 people are affected by stroke annually in Australia with over 50 million stroke survivors world wide; since one in three stroke survivors experience depression, this is a significant public health problem.

A recent update of a *Cochrane Review* determined whether pharmaceutical treatments or psychological therapies, started early after stroke, can prevent depression and improve physical outcomes in stroke patients.

Author Dr Maree Hackett and colleagues at The George Institute and The University of Leeds reviewed 14 trials that were designed to compare drug treatment with placebo or psychotherapy with standard care to prevent depression in patients with stroke. "We found



a small but significant effect of psychotherapy on improving the mood of stroke patients and preventing depression. There was no evidence however, that antidepressant drugs prevent depression or improve physical recovery in this patient group," said Dr Hackett.

"The term depression is commonly used these days to describe feeling sad or down, and this may be a natural reaction following a stroke. However, for one in three survivors these feelings of depression are persistent and they start to interfere with patients' day-

to-day lives. This is the depression we need to prevent," said Dr Hackett. "When people feel depressed they may feel isolated or worthless, their sleep patterns may change and they are tired, irritable, stop their rehabilitation, stop socialising or going to work. This is when depression becomes a problem, not just for the stroke survivor, but also for their family and friends."

There has been little information to guide clinicians and researchers as to how to prevent depression after stroke. While the studies in this updated review show that psychological therapy prevents depression, it is unclear if these benefits can be generalised among all stroke survivors due to the small number of patients who took part in the trials.

The George Institute for International Health is currently planning a detailed research program to further investigate effective management strategies for patients with stroke, and to encourage the further education about depression in the context of physical illness.

Staff Profile



DR MAREE HACKETT
Senior Research Fellow

An opportunity 'to cross the ditch' from NZ and work at The George while completing her PhD seemed like a good decision to Maree who has been working at The Institute since 2005.

After participating in a research study as a young girl, Maree became interested in research. "I always wanted to either work in a university or work in a hospital," said Maree.

Growing up in Auckland, Maree swore she would never attend university. However, now with a Bachelor of Arts in English and Psychology, a Masters in Health Psychology and a PhD in Medicine under her belt she admits that studying again isn't out of the question.

As Senior Research Fellow in Mental Health at The George, Maree's primary role is to develop a program of research in mental health, "My specific interest is psychological illness in the setting of chronic disease. I supervise post graduate students across a variety of disciplines who have an interest in mental health and coordinate a Masters in Public Health block elective paper at the University of Sydney in my role as conjoint Senior Lecturer within the

Faculty of Medicine. Recently, I received a NHMRC Public Health Australia Fellowship to look at strategies to reduce vascular depression."

Working with collaborators at Gosford Hospital, Maree and her team are currently setting up a pilot trial of a very simple intervention that is hoped will prevent depression after stroke. "Recruitment will run for a year, and follow-up for six months. If this shows some sign of working I would love to roll it out as an international prevention trial. I love the idea of simple, novel interventions that make big differences," she said.

"In my role at The George, I'm lucky to work with fabulous colleagues all over the globe," she added. Outside of work, Maree plays classical guitar and aspires to take on the highly sought after role of Mrs George Clooney.

INJURY IN INDIA

Suicide, injury: major cause for concern in rural India



New research from a comprehensive mortality survey conducted in rural India has revealed that injury is the second leading cause of death, responsible for 13% of all deaths in adults. The new data shows that self-harm was responsible for 36% of all injury-related deaths including poisoning, hanging and self-immolation.

The primary causes of injuries resulting in death were suicide (36%), falls (20%), and road traffic crashes (13%). A concurrent survey showed that falls (38%) and road traffic crashes (25%) were also the leading causes of injuries that did not result in death. The study examined injury-related mortality and morbidity from residents in 53 villages in East and West Godavari Districts of Andhra Pradesh, that have a population of more than 200,000.

Injury is a major contributor towards death and disability worldwide, and according to author Associate Professor Rakhi Dandona at The George Institute, India around 90% of injury-related deaths occur in low- and middle-income countries such as India where very little is known about the burden or causes of injury. Previously, health systems have been designed

to cope with infectious diseases. Injury is not recognised as a major public health issue by the local authorities because of poor availability of robust data on the injury burden. According to Dr Dandona this new data demonstrates that we now need services that can deliver care and prevention for injury.

Previous results of this survey showed that diseases of the cardiovascular system, such as heart attacks and stroke, were the leading causes of death. Infectious diseases such as tuberculosis and HIV/AIDS caused only about 12% of deaths. In line with India's rapid economic and societal changes, the health system must include a focus on chronic diseases and injury in addition to infectious diseases.

"The leading causes of injury - falls, road traffic crashes, and suicides - are all preventable. It is important that effective interventions are developed and implemented to minimise the impact of injury in the region. In particular, given that mainly 15-44 year olds are affected by injuries, the economic impact is substantial and clearly highlights the need for urgent intervention," said Dr Dandona.

Researchers note the first step is to implement programs and policies aimed at addressing injury in rural India, including;

- Community-based programs to reduce suicides
- Exploring options to decrease access to poisons
- Actions to increase the use of motorcycle helmets
- Occupational health and safety measures
- A review of ways to reduce falls in the home and
- A focus on preventing drowning.

This study was completed as part of the Andhra Pradesh Rural Health Initiative (APRHI). This initiative is a collaboration between The George Institute and The University of Queensland in Australia, the Byrraju Foundation, the Centre for Chronic Disease Control (CCDC) and the CARE Foundation in India. Since 2003, the APRHI group has worked to identify the main health problems in the region and to develop evidence-based methods of dealing with them.

SPOTLIGHT ON MUSCULOSKELETAL RESEARCH

Cracking the problem of whiplash

Thousands of people experience whiplash injuries each year that can have a devastating impact on their quality of life.

Many people recover within a few weeks from whiplash injury following a motor vehicle accident, but around a third continue to have severe and debilitating symptoms for months and even years afterwards. The condition can cause major disruptions to home, work and leisure activities for those affected, and the expenses associated with their management are responsible for a large proportion of compulsory third party insurance costs in Australia.

A new study driven by researchers from The George Institute and the University of Queensland is now underway, aiming to identify those patients who are more likely to develop long-term symptoms.

Patients will be measured shortly after their accident and their recovery will be charted over



Photo courtesy NRMMA

a one year period. Physical and psychological functioning will be assessed within the first and third month after the car accident. Recovery will be measured after six and 12 months.

Study manager, Steve Kamper, from The George Institute's musculoskeletal research

team, said this information will help health professionals to identify those people who are at risk of a poor outcome and target them for specific interventions. "Chronic whiplash is a particularly complex and costly condition, so the ability to identify at risk patients soon after their accident is crucial to ensure early and appropriate intervention, particularly given the difficulties in treating patients with chronic symptoms," he added.

"Additionally, the data collected will provide insight into the mechanisms underlying the pain and disability experienced by patients following a whiplash injury. This is especially important because it will help design new and effective treatments that target the specific problems associated with whiplash injuries."

For further information, please contact Steve Kamper on skamper.george.org.au

UAE and Australia join forces in health and road safety research

In a move to strengthen ties and enhance research collaboration, The George Institute and the Emirates Institute for Health and Safety have signed a memorandum of understanding (MOU).

The MOU includes agreement to work together in the United Arab Emirates (UAE) in the following areas:

- Road Safety
- Occupational Health and Safety
- Health and Nutrition in schools
- Health Policy
- Risk Assessment and Management
- Trauma Care and
- Data Linkage Projects



The George Institute and the Emirates Institute for Health and Safety will work together on road safety initiatives in the UAE.

Senior Director and signatory for The George Institute, Professor Mark Stevenson (L) said the MOU is an exciting step forward in our array of

research collaborations. "The memorandum of understanding between The George Institute and the Emirates Institute for Health and Safety will see both parties working together to conduct public health research in the United Arab Emirates and the region."

Dr Yousef Al Hosani (R), Vice Chairman and CEO of the Emirates Institute for Health and Safety said, "I am very proud to be strengthening research ties between the United Arab Emirates and Australia. Both parties have considerable research capabilities and together we will make significant strides in enhancing road safety and other public health-related research."

Salt and health warning on sausages

Only 2% of sausages in Australian supermarkets meet acceptable salt levels. Just one single sausage sandwich at your local barbecue could contain as much as 6 grams of salt; 100% of the maximum daily recommended amount for adults and almost double that recommended for children.

Eating too much salt is bad for health, raising blood pressure and greatly increasing the chances of suffering from heart disease or stroke. The product overview by The Australian Division of World Action on Salt and Health (AWASH) shows that other products commonly eaten at barbecues, such as hamburger patties, tomato sauce and some white breads, are also high in salt. It shows huge variations in the salt content of different brands of similar products, with some sausages containing over three times as much salt as others.

To combat the high level of salt in foods, AWASH has recently launched a strategy of working with the food industry to reduce salt in foods by 25% over five years. The strategy requires high level commitment from the food industry and the development of individual company action plans. AWASH is also inviting views on proposals for developing targets for salt levels for specific products and focusing on processed meats, bread and the fast food sector.

The Australian Food and Grocery Council supports the need to reduce population salt intakes to below 6 grams per day and many major food companies have already developed salt reduction plans in line with the AWASH strategy.



Professor Bruce Neal, Senior Director at The George Institute and AWASH Chair says that while some food companies deserve credit for their efforts to reduce salt, a lot more still needs to be done. "Major players such as Coles, Kellogg and Unilever have been reducing salt for some time, but there are still far too many high salt products on supermarket shelves."

"The food industry in Australia is committed to further action to reduce salt in foods. The Government now needs to make salt a national health priority and lead negotiations on maximum salt targets for different products. Only then, will Australians have a chance of reducing their daily salt intake to recommended levels."

Salt is a leading cause of high blood pressure in most countries around the world, and high blood pressure causes more deaths than anything else.

AWASH is a growing network of individuals and organisations concerned with salt and its effects on health. The mission of AWASH is to improve the health of Australians by achieving a gradual population-wide reduction in dietary salt consumption that will reduce cardiovascular diseases and other salt-related health problems. The AWASH secretariat is housed at The George Institute. For further information visit www.awash.org.au.

Scaling-up HIV interventions in India

Scaling-up HIV prevention interventions has been recognised as an urgent need in India but little information exists on the costs that would be associated with it. India's National AIDS Control Programme will significantly enhance prevention activities in the country and for this reason local data on cost, quality and trends is needed to ensure the best possible allocation of resources.

"We studied changes in unit costs of two major interventions over a period of time," said author Professor Lalit Dandona, Director of The George Institute, India. This included representative samples of public-funded VCT (voluntary counselling and testing) centres and sex worker programs in Andhra Pradesh, India. Professor Dandona and colleagues assessed over a period of three years how the economic cost of providing VCT and sex worker interventions changed in Andhra Pradesh, the Indian state with India's highest burden of HIV.

"Local data are vital for policy makers to make the best possible decisions on resource allocation," said Professor Dandona. "We found that the unit cost for providing VCT to each client halved over three years due to a large increase in clients served without any indication of associated compromise in quality of services, indicating under-utilised capacity in the early stage that was utilised in the later stage. On the other hand, the unit cost of providing HIV prevention services to sex workers more than doubled over a three year period largely due to improvements in the quality of these services. These local longitudinal cost data should be useful to inform the currently planned scaling up of HIV interventions in India," said Professor Dandona.



Using HIV research findings to improve interventions

Professor Dandona was recently invited to speak at the XVII International AIDS Conference in Mexico City on 'Epidemiology estimates of HIV: how accurate and useful are they?'. The talk was based on data from this and other HIV studies conducted by Professor Dandona and his team in India in addition to the recent National Family Health Survey.

"There is much global interest in better understanding HIV in India as, until recently, scientifically sound data have been mostly coming from sub-Saharan Africa," said Professor Dandona. The George Institute, India is involved with a variety of scientific studies to contribute to the evidence base needed for effective control of HIV in India.



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ISSN 1833-3656