Healthier hearts for online shoppers

New research from The George Institute has seen online grocery shoppers improve their diets at the click of a button. Results from what is the world’s first study of internet shopping, shows that offering simple dietary advice to online consumers can lead to significantly healthier food choices.

Cardiovascular disease is Australia’s biggest killer, leading to tens of thousands of deaths per year. George researchers believe that an innovative, low-cost method of influencing dietary patterns has great potential to reduce this toll. Benefits could be especially large as the Internet-savvy younger generation ages.

Director of Nutrition and Lifestyle at The George Institute, Dr Rachel Huxley, believes “Online food shopping offers a unique opportunity to change food purchasing habits. Almost 150,000 Australians already purchase at least some of their groceries online every year and that number is growing. This approach offers Australians a low-cost, long-term, non-drug strategy for reducing their fat intake and their cholesterol levels.”

The study involved 497 online shoppers who received real-time personalised advice, recommending foods lower in saturated fat. The study showed that shoppers who received dietary advice reduced the saturated fat in their shopping baskets by 10%, a positive step towards a healthier diet.

Researchers reviewed a list of commonly purchased food items that contained up to 92% saturated fat and identified a suitable low-fat alternate for each. As consumers selected their product, they were presented with the opportunity to either retain the product or swap it for the alternate lower in saturated fat. A simple side-by-side, on-screen display of the original item and the suggested alternate was used.

The average age of participants was 40, each shopping for an average of about three people. The study also showed that shoppers maintained good dietary practices over consecutive shopping events. Benefits appeared greater among people with higher body mass index and greater age, who may have most to gain. Lower fat dairy products were the items most frequently added to the shopping after dietary advice was provided.

Senior Director, Research and Development at the Institute, Associate Professor Bruce Neal noted, “It is easy to imagine an adaptation of the system that could provide advice about salt intake or advice to consumers with specific disease states such as diabetes, high blood pressure or high cholesterol.”

Dr Neal trusts that new technologies united with this simple approach provides opportunities for wider development. “With automated personalised computer advice now of proven benefit in a commercial setting, the challenge will be to see the results translated into practice. This will require imaginative approaches developed in collaboration with public health advocacy groups, regulatory bodies and the food retail industry,” he added.

This project was published in the open-access journal *PLoS Clinical Trials* from the Public Library of Science and funded by The National Heart Foundation of Australia and the Future Forum.

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**TOP TEN TIPS FOR A HEALTHIER SHOPPING BASKET**

1. Choose soft margarines instead of butter
2. When cooking, use vegetable oils (olive and canola oils)
3. Avoid creamy sauces, instead choose vegetable based sauces
4. Buy meats labelled “lean” or “extra lean”
5. Select chicken and turkey over high-fat processed meats (sausages and salami)
6. Opt for skim/low-fat milk
7. Choose calcium-enriched soy products such as soy milk and soy yogurt
8. Substitute low-fat cheese for full-fat cheese
9. When buying snacks (e.g. potato crisps, cakes, chocolate) and processed foods (e.g. pastries, pies, pizza and hamburgers) look for the reduced fat alternatives available
10. Try fat-free or low-fat yogurt
A Message from the 
Principal Directors

Welcome to our new Board Chairman, Dr John Yu AC MD FRACP

It is with great pleasure that we welcome Dr John Yu AC to the position of Chair of the Board of The George Institute, following a decision by Mr Peter Burrows AO to step down from this role after almost seven years of service to the Institute. We are delighted to have been able to make such a distinguished appointment and are grateful to John for agreeing to add us to his already considerable responsibilities in medicine, science and the arts in Australia.

Best known as the recipient of the Australian of the Year Award in 1996, John has played key roles as Chief Executive of the Royal Alexandra Hospital for Children (subsequently the Westmead Children’s Hospital in Sydney) and, most recently, Chancellor of the University of NSW. John’s breadth of knowledge in the academic, health and international arenas are tremendous assets that will be of immeasurable benefit to the Institute.

In previous issues of George Research we have highlighted the wide range of activities in which the Institute is engaged in Asia, in an effort to tackle the seemingly irrepressible rise of chronic disease and injury in the region. We believe that John’s leadership will be of direct assistance to us in pursuing this goal. His ongoing roles as the Chair of the International Advisory Council of the University of NSW Asia in Singapore, Chair of the International Centre of Excellence for Asia Pacific Studies at Australian National University and Chair of the Australia-China Council will perfectly complement his role as our new Chairman.

John envisages an important future role for Australian health research in assisting countries in Asia to develop their capacity to address both existing and emerging challenges presented by chronic diseases and injuries. In line with the mission of the Institute, John believes that equitable access to effective and affordable prevention and treatment strategies for these conditions should be considered essential components of both social and economic development throughout the region.

We also wish to thank Peter Burrows, our Foundation Chairman, who has supported the development of the Institute since its inception in 1999. We would like to publicly acknowledge Peter’s critical role in facilitating the establishment and growth of the Institute over the past seven years. We thank him for his guidance, and wish him all the very best for his future endeavours.

At this time it is also appropriate for us to acknowledge our appreciation of the staff of the Institute, both in Australia and in our offices in Beijing, London and India. We also wish to express our thanks to our Board, collaborators, partners, funding bodies, colleagues and readers for your support during 2006. We wish you the very best for the festive season and look forward to continued contributions to international health research over the coming year.

Robyn Norton
Stephen MacMahon
The George Institute for International Health
Reducing the burden of kidney disease

In Australia, kidney disease causes or contributes to approximately one in ten deaths. The incidence of this disease among Aboriginal Australians is much higher, with rates of end-stage kidney disease being up to thirty times more than the national average.

The ageing population and the global diabetes epidemic, along with high rates of hypertension, obesity and smoking are leading to significant increases in the number of people with chronic and end-stage renal disease (where kidney function is less than 10% of normal). The number of people around the world receiving renal replacement therapy (as maintenance dialysis or a kidney transplant) is currently estimated at 1.4 million, and projected to at least double in the next decade.

Focusing on treatment and prevention strategies for kidney disease, the Renal Division at The George Institute plays an important role in tackling the rise of this chronic disease across Australia and the region. Renal experts at the Institute have a strong focus on improving equity in access to health care for people with kidney disease. Renal health in Indigenous communities is also a high priority of the Division’s work.

The Renal Division is currently working with the Australian and New Zealand Intensive Care Society Clinical Trials Group, looking at the effect of different doses of dialysis in patients with severe, acute kidney failure in the intensive care unit. This project aims to reduce the very high death rates caused by acute renal failure, which currently claims 1,800 lives each year.

Indigenous Australians comprise around two per cent of the Australian population, however they constitute almost ten per cent of people commencing dialysis for end-stage kidney disease. Researchers at the George are also investigating barriers to Indigenous Australians’ achieving the best outcomes with dialysis and transplantation, whether they live in urban, rural or remote communities.

Collaborative work is an essential part of the Renal Division’s research. Currently, the team collaborates with kidney specialists across Australia, New Zealand, Malaysia, Thailand and China; Indigenous researchers, communities, and health services; and bureaucrats and health policy makers to improve health outcomes for people with kidney and related chronic diseases.

To find out more about the Renal Division at The George Institute, visit www.thegeorgeinstitute.org.

Staff Profile

As a recipient of the International Rotary Ambassadorial Fellowship, which supports individuals in performing high-quality research in the country of their choice for one year, Alex Martiniuk left her native Canada and headed down-under to The George Institute in January 2005.

“It was an easy decision to come to The George Institute, because of its policy-driven research and the opportunity to work with a large Asia Pacific research group. The breadth of the Institute’s international projects was also a huge draw-card, as was its not-for profit nature.” Alex says she has always been interested in health and disease. “In my university undergraduate years I came to realise that I wanted to work on “upstream issues” related to health. At university I read a book called “The Coming Plague” where I first learned about the discipline of epidemiology. Since then I have enjoyed using epidemiologic tools to address policy-relevant research questions.”

Since attaining her PhD in Epidemiology and Biostatistics from the University of Western Ontario in Canada and a Masters of Science in Community Health and Epidemiology from Queen’s University in Canada, Alex has conducted research on HIV, cancer, cardiovascular disease and health policy.

Prior to working at The George Institute, Alex played a role in organising the first Child Health Elective bringing together Canadian, Israeli, Jordanian and Palestinian medical students, together with the Canada International Scientific Exchange Program (CISEPO) at Mount Sinai Hospital and the University of Toronto. After many successes, the program is known for helping foster relationships between doctors and researchers in this region. Alex still maintains her role in this important initiative (more information can be found at www.cisepo.ca).

Following her year under the Rotary Fellowship, Alex has continued to work for the Institute as a key member of the APCSC research team. “The APCSC is a large collaborative project that pools data from existing longitudinal studies on cardiovascular disease in the Asia-Pacific region to provide much needed evidence on stroke, heart disease and other common causes of death in the region,” Alex says.

Alex also recently received a Canadian Institutes of Health Research (CIHR) Fellowship, giving her the opportunity to stay at the George for a third and fourth year, while also lecturing at the University of Sydney.
Injury is a leading cause of Indigenous mortality in Australia, yet little is known about the impact of injury on Indigenous children and youth, particularly those living in urban areas. To increase our understanding of the relationship between injury, socio-economic disadvantage and resilience in Indigenous communities, The George Institute is undertaking a major study, called Safe Koori Kids.

The George Institute and the Yooroang Garang School of Indigenous Health Studies at The University of Sydney have worked closely with local Aboriginal community organisations in South West Sydney and Campbelltown City Council to develop an innovative approach to address the risk of injury to youths and children in the area. A particular focus of the Safe Koori Kids program is to reduce the incidence of injury amongst the Aboriginal population, which has been shown to experience higher injury rates than other parts of the community in New South Wales. The three-year study is being funded by the National Health and Medical Research Council.

Leader of the study, Dr Kathleen Clapham of The George Institute, says that it was important for programs like this to engage kids in thinking about safety and making safe choices as they develop into teenagers. "Injury is a leading cause of Indigenous mortality in Australia, but little is known about the impact of injury on indigenous children, particularly those living in urban areas."

Aboriginal Education Director of the South Western Sydney Region, Cheryl Best, is also a keen supporter of ‘Safe Koori Kids’ along with many families of local school students.

The Safe Koori Kids program will involve teachers encouraging students and parents to think about risks, both inside and outside of the school, which can cause injury to themselves and others. Students will also explore what can be done to eliminate or reduce the risk of harm. The program will enable students to register their ideas on the ‘Safe Koori Kids’ website at www.thegeorgeinstitute.org/safekoorikids, developed as a resource to enhance the existing school curricula, particularly in PDHPE (Personal Development Health and Physical Education) and HSIE (Human Society and its Environment) which are compulsory parts of NSW primary education.

Launching the Program

Students at Briar Rd Public School, at Airds in Sydney’s South West, launched ‘Safe Koori Kids’ on 21 September, 2006. Briar Rd Public School had been specially selected to pilot the program, with students in years 5 and 6 participating in school and community safety activities as part of the curriculum, including helping to develop a safety website.

Principal of Briar Rd Public School, Kathy Browne, said both teachers and students are enthusiastic to participate and learn about creating a safer environment at school, home and in the community. “Safety is a big concern for both teachers and parents. This is a great opportunity for the students to be a part of a program that will avoid harm and essentially will save lives.”

Dr Clapham acknowledged that kids can be hurt while playing at school, on the road or playing sport. “They can also be injured through risk taking, bullying and self harm. We have worked with many members of the indigenous community to develop culturally acceptable and effective activities targeting children, such as our website.”

This program is supported by the NSW Department of Education and Training. To find out more about this initiative, please visit www.thegeorgeinstitute.org or call 61 2 9993 4500.

Leading the way in Indigenous Health Research

Senior Research Fellow, Dr Kathie Clapham was recently awarded the Australian Injury Prevention Network’s 2006 Award for Meritorious Achievement in Research. Aside from her work on the Safe Koori Kids program, Kathie was also the lead investigator on a successful grant submission to the Commonwealth Department of Health and Ageing’s Falls Prevention and Injury Prevention Community Grants Program for a Safety Promotion and Injury Prevention Program for Rural and Remote Aboriginal Health and Community Workers in the Bourke region.
Dr Javier Guzman joined The George Institute in March 2006 as Senior Researcher and Policy Analyst for the Health Policy Division. Driven to the Institute by his interest in international health policy, Javier has found The George Institute’s focus on developing countries a perfect fit.

Prior to arriving at the Institute, Javier was instrumental in the Pharmaceutical Research and Development (R&D) Policy Project at the London School of Economics. Here, Javier co-authored a global report on the status of drug development for neglected disease across the pharmaceutical landscape. “The report’s focus was on diseases affecting the developing world, and included ailments such as malaria and tuberculosis, which kill around three million people each year,” says Javier.

While many believe that little was being done to produce new drugs for these diseases the report entitled ‘The new landscape of neglected disease drug development’ showed this was not the case. “We found that over 60 new drug projects were focusing on neglected diseases, of which three quarters were conducted by public-private partnerships (PPPs). These partnerships coordinate large pharmaceutical companies with academics, non-government and multi-lateral groups like the WHO.”

The team responsible for the report has since moved to The George Institute, and is concentrating on new pharmaceutical R&D tools that can be used by government and donors. Currently, Javier is interviewing product developers of new malaria treatments and vaccines around the world, mainly in the United States. “We are gathering qualitative and quantitative data on their malaria work, mainly on number of projects, clinical trial costs, R&D plans, partners and funding streams. The idea is to collect all of the data by the end of this year, analyze it and devise policy recommendations for big funding bodies and donors on how to streamline and coordinate better the malaria drug and vaccine development process.”

Javier graduated from medical school in Colombia seven years ago, and has since studied his Masters of Science in Health Policy, Planning and Financing at the London School of Economics and the London School of Hygiene and Tropical Medicine. Since then, Javier has enjoyed working in health policy, “This type of research has the ability to make substantial changes at the population level.”
**Stroke rates sinking in the west**

Researchers have found a reduction in the incidence of stroke in Perth, Western Australia.

Stroke affects around 17 million people globally and is widely recognised as one of the biggest killers in Australia. Nationally, over 53,000 strokes occur each year, of which one third will lead to deaths in the first 12 months. Without prevention, the annual rate of strokes in Australia has been predicted to rise to 74,000 by 2017 due to the ageing of the population.

Contrary to these striking data, however, the incidence of stroke in Perth, Western Australia, has declined 43% over the last decade, according to new research recently announced by The George Institute at the Annual Scientific Meeting of the Stroke Society of Australasia.

The results of this eleven-year ‘Perth Community Stroke Study’, conducted from 1989 to 2001, focused on the trends of strokes in both men and women, and the frequency of risk factors that play a key role in the incidence of stroke. The project involved collaboration between leading stroke research centres, The George Institute, Royal Perth Hospital, the University of Western Australia and The University of Queensland.

Professor Craig Anderson, Director of Neurological and Mental Health at The George Institute says the study found that, despite the population in inner-metropolitan Perth increasing over the eleven-year study period, the number of strokes declined significantly.

Stoke rates were noted to fall faster in men, who experienced a 49% decline, compared to a 37% drop in the rate of stroke amongst women. Researchers believe this considerable reduction in stroke rates in Perth, WA can be attributed to the fact that stroke is preventable. The risk of experiencing a stroke is influenced by factors such as age, gender, family history, diabetes, high blood pressure, smoking, diet and exercise.

Professor Anderson notes that stroke has been an increasing health problem for Australians, which highlights the need to prioritise preventative strategies. “These results are testament to the advances in approaches to prevention and management of stroke, including a more consistent range of health services available to the community. They also provide positive feedback on successes being made in the reduction in some risk factors and hence a reduction of stroke in the studied area.”

Principal Investigator, Professor Konrad Jamrozik of the University of Queensland, agreed that there were significant reductions in the frequency of risk factors, including hypertension, smoking and history of heart disease. “This suggests that people are ‘getting the message about leading healthy lifestyles and reducing their threat of this neurological condition.”
Welcome to Professor Yangfeng Wu

In addition to his current role as Director, Clinical Research Program at Peking University Health Science Centre, Professor Yangfeng Wu has recently joined The George Institute, China as its Director of Research and Development. Although being a cardiovascular specialist, Professor Yangfeng Wu will be responsible for the scientific program of The George Institute, China which includes all areas of non-communicable disease and injury. As a cardiovascular specialist based in Beijing, Professor Yangfeng Wu has made valuable contributions to reduce the impact of cardiovascular disease in the region thanks to his work at Fu Wai Hospital, the WHO Collaborating Center in Cardiovascular Disease Prevention, Control and Research, China and Peking University.

Yangfeng is well known for his knowledge of cardiovascular issues in China. As the Director of the WHO Collaborating Center in Cardiovascular Disease Prevention, Control and Research in China he has reported on hypertension control in low and middle income countries, including reducing salt intake in populations. “I still enjoy my role as a member of the WHO Virtual Expert Network for the Global Strategy on Diet, Physical Activity and Health and am very much looking forward to working with The George Institute to find helpful solutions that can make a real difference in the prevention and control of cardiovascular disease and risk factors in China.”

On joining the Institute, Yangfeng says “I did not hesitate, as the outstanding level of international researchers at the Institute is admirable. I believe that my research ability can be improved through working with the Institute’s researchers, and we can achieve greater prevention and control of cardiovascular disease.”

Yangfeng says his chief interests include risk factors, trends and the increased rate of cardiovascular disease, as well as prevention measures both in population and high risk patients.

“I have enjoyed research for many years and have been involved in many projects, including several George Institute past projects”. He has played a key role in China’s National Five-Year Plans and in many international cardiovascular collaborative studies.

“I have also worked on developing the Chinese Practice Guidelines on Prevention and Control of Hypertension in Primary Care in 2002. These were issued and endorsed jointly by five related academic authorities in China – the Chinese Society of Cardiology, China’s CDC, the National Center for CVD Control and Research, the WHO Collaborating Center for CVD Prevention, Control and Research, China and the Beijing Hypertension Association. It was also endorsed by China’s Ministry of Health.”

Over 20,000 health care providers, mostly primary practitioners, have now been trained according to these guidelines. As well as earning many academic awards from the Chinese government, Yangfeng has published more than 120 research papers in international and Chinese peer-reviewed journals. Yangfeng is particularly proud of a recent research paper on circulation, which will be published shortly. “This paper studies risk factors of cardiovascular disease in Chinese and develops tools to estimate risks of disease over a ten-year period for use in prevention and control, particularly for those individuals who have a greater risk of stroke than that of coronary heart disease.”

“2002年，我领导编写了《初级卫生保健中高血压疾病防治指南》，被中国心脏病学会、中国疾病预防控制中心、国家心血管疾病控制与研究研究中心、世界卫生组织驻中国心血管疾病预防、控制与研究协作中心、北京高血压学会等5个专业机构联合出版，并由卫生部以正式文件形式向全国推广。”截至目前，有2万多名基层的医务工作者接受了该指南的培训。

在获得了许多由中国政府授予的学术奖励的同时，武教授在国内外专业学术期刊上发表了120多篇学术论文。他尤为骄傲的是近期将在《循环杂志》上发表的一篇论文。这篇论文分析了中国心血管疾病如何借助前沿的评价方法和防控措施，特别是针对那些更易发生中风的高危人群，
In previous issues of George Research, we have highlighted the rise of diabetes, hypertension and smoking in rural India. Now, new data from a large survey of the causes of death in rural Andhra Pradesh have shown that chronic disease and injuries are claiming more lives than ever.

The new report was published recently in the International Journal of Epidemiology, and raises significant concerns for hundreds of millions of individuals living in the area. This study was completed as part of a collaboration between The George Institute, The University of Queensland, the Byrraju Foundation, the Centre for Chronic Disease Control (CCDC) and the CARE Foundation in India.

In line with India's rapid economic and societal changes, there has been a shift in focus from infectious diseases. Diseases of the cardiovascular system, such as heart attacks and stroke, caused 32% of deaths in this region. Death from injury (self-inflicted injury, falls, etc) was the second most common cause (13%). Behind these was infectious diseases, such as tuberculosis, intestinal infections and HIV/AIDs (causing approximately 12% of deaths) and cancer (responsible for about 7% of deaths).

Dr Rohina Joshi of The George Institute believes this research shows a new pattern of mortality requiring urgent attention. "The mortality data are a key indicator of the health problems now facing rural India. While health systems have been designed mostly to cope with infectious diseases, we now need services that can deliver care and prevention for chronic diseases."

Professor Alan Lopez of The University of Queensland, who has led similar studies in Asia and Africa, said that the findings were an urgent call for action to control chronic diseases in developing countries. "Far too little attention has been devoted to preventing adult death in poor countries, in part because we have not fully appreciated how common these diseases really are in these countries."

"Risk factors for cardiovascular diseases such as heart attack and stroke are common in this community. We have previously shown that over one fifth of adults have high blood pressure, one quarter are smokers and about the same proportion are overweight. We also know that the management of these risks remains poor," Dr Joshi added.

Cardiovascular disease is the leading cause of death worldwide, accounting for more than 16 million deaths annually. The majority of these deaths now occur in developing countries such as India, where rates of heart attack and stroke have ballooned in the last few decades. In addition, because cardiovascular diseases occur earlier in life in developing regions, the economic impact is enormous. "The prevalence of these diseases underlines the need to establish health care services that will address the emerging burden of chronic diseases in developing countries," said Dr Joshi.

Associate Professor Bruce Neal, Senior Director of Research and Development at The George Institute, explained that “These results confirm the speed with which health problems are changing, even in quite rural areas of India. The growth of conditions like diabetes is going to drive a huge increase in heart disease and stroke in regions that are not well equipped to deal with such diseases”.

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**THE GEORGE INSTITUTE**

**for International Health**

**Hospital**

Level 10, King George V Building
Royal Prince Alfred Hospital
Missenden Road, Camperdown
Sydney NSW Australia
Telephone +61 2 9993 4575
Facsimile +61 2 9993 4501
www.thegeorgeinstitute.org

**City**

Level 24
Maritime Trade Towers
207 Kent Street
Sydney NSW Australia
Telephone +61 2 9657 0374
Facsimile +61 2 9657 0301

**Postal Address**

PO Box M201 Missenden Road NSW 2050 Australia

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