

Heart attack survivors should hit the gym

A recent Swiss study has shown that although any exercise program can improve blood flow following a heart attack, the benefits last for only a month after exercise is stopped.

Dr Margherita Vona, director of the Cardiac Rehabilitation Centre at the Clinique Valmont-Genolier in Glion sur Montreux, said 'The main goal of our study was to determine the impact of different types of exercise on vascular [blood vessel] function. The conclusion was that in our patients, after a heart attack, all types of exercise were useful for correcting vascular dysfunction, without any difference among aerobic, resistance or combined training'.

'These data imply that good, long-term adherence to training programs is necessary to maintain vascular benefits on endothelial dysfunction' Vona said.

The researchers recruited 209 heart attack survivors to participate in the study, and they were placed in groups which focused on either aerobic training, resistance training, a combination of both of these or no training at all.

The aerobic group had four weekly cycling sessions which included a 10-minute warm-up, 40 minutes of cycling, and a 10-minute cool-down. The strength training group were prescribed four weekly sessions of 10 exercises using weights and resistance bands.

Flow-mediated dilation (FMD), the amount that blood vessels widen to increase blood flow, was used to measure Endothelial function. Both exercise groups displayed a significant increase in FMD from 4 per cent to 10 per cent. The non-exercising control group exhibited no significant FMD change.

Discussing the loss of improvement evident four weeks after exercise had ceased, Vona stated, 'This aspect is particularly important in patients with coronary artery disease, in whom correction of endothelial dysfunction could help to slow the progression of atherosclerosis and probably avoid new cardiovascular events'.

Dr Johnny Lee, an assistant clinical professor of medicine at Mount Sinai Medical Center in New York City, commented on the study's findings, saying 'Most of the time, we tell patients about aerobic exercises – running, jogging and swimming. We haven't thought that resistance exercise, lifting weights and the like, can have an equal benefit. This shows that it does. That there was benefit from aerobic exercise was no surprise. What was a surprise was that resistance exercise gave equal benefit'.

Lee went on to discuss the need that the study had shown to make exercise an ongoing habit for heart attack survivors, concluding, 'If this applies to the sickest patients, that if you stop you are going to lose the benefit, it shows that continuing to exercise can only have a positive effect if you are a normal subject with no heart disease'.

Source: *Circulation*

Young at heart...?

As a fitness devotee, you are now on the right path to a fitter and healthier you. In fact, you might even reckon you feel, and maybe look, younger than you actually are, thanks to your well-balanced diet, exercise regimen and refusal to partake in nicotine or alcohol. OK, perhaps not the bit about alcohol, but hopefully the first few points are valid. So, with your body being your temple, and all that, how old do you think your body really is?

I pondered this very question last week as I found myself standing nervously in a Sydney gym waiting for my body's biological age to be tested. Surely the past few years of (relatively) healthy eating and regular exercise had done me some lasting good? Those street-pounding runs and heart-pounding indoor cycle classes must have undone some of the excesses and neglect of my late teens and early twenties? But then again, a crook back had put me out of action for the

best part of the last month and my cardio fitness must have suffered... I would know soon enough, so I told myself that as long as my biological age turned out to be no older than my actual age, I would be happy. Secretly, though, I wanted to be younger, of course.

The ultimate solution for being younger than your birthday age begins with determining the body's BioAge, a scientific measurement based on an integrated wellbeing assessment of various physical tests and lifestyle evaluations. There is greater motivation for better long-term health and fitness when focusing on the holistic nature of the BioAge rather than a single factor such as just reducing blood pressure or cholesterol. Now, BioAge testing software has been created for the health and fitness industry by Paul Taylor, an exercise physiologist and nutritionist who has studied neuroscience, quantum physics and positive psychology.

Biological age testing has been developed by a team of exercise physiologists and approved by doctors, making it scientifically valid and clinically relevant; the measures tested have real impact on lifespan and longevity. Taylor says, 'Making permanent health and lifestyle changes for better wellbeing is easier when we discuss reducing the BioAge, especially when compared with the chronological age; you may be 40 chronologically, but you can have a biological age of 30 or younger!'

'For motivation of the mind and body towards better health, the key to change is based on the brain's 'reward pathway' where certain rewards are worth repeating certain behaviours. Some natural rewards include things such as nurturing, water, food and sex which are considered vital for continuing existence of the species. Motivation to exercise and eat well comes from the anticipation of these fundamental rewards and the ability to self-regulate – using the 'executive brain' to undergo short-term sacrifice for long-term gain' Taylor explains.

There are two levels of testing; the Standard Biological Age Test determined from physical and behavioural assessments, and Clinical Biological Age Testing which is more comprehensive, adding metabolic measurements including cholesterol levels and lung function. Each test has a weighting taken into account when calculating the BioAge. Elements such as cholesterol and aerobic fitness have a higher weighting than other physical tests, such as the number of push-ups completed, as these have the least impact on longevity.

Lifestyle factors identified as indicators of disease are assessed, such as nutrition, stress, smoking and alcohol consumption. For physical tests, there is a range of assessments which may be done such as push ups, flexibility and measuring the body composition. BioAge testing can be used to assess wellbeing and monitor progress, an assessment that individuals can seek from health and fitness professionals.

To tailor a wellbeing program focused on longevity and for the most effective method to reduce the BioAge of an individual, Taylor identifies where they are positioned on a scale of motivation. This ranges from 'Amotivation' where there is no motivation, then 'Other-Determined Extrinsic Motivation' where a person is driven by rewards, coercion, guilt and motivation from others such as a partner or looking good for an event. Getting to the next phase, 'Other-Motivated Extrinsic Motivation' involves passing through the 'Threshold of Autonomy', which Taylor believes is the key to a younger BioAge and better holistic wellbeing.

'For most people, crossing the 'Threshold of Autonomy' is the defining moment for permanent change. This is where you become motivated by good health, fitness and the benefits of these such as reduced stress or a more positive attitude. Following this, 'Intrinsic Motivation' is the focus for individuals and athletes who are motivated by enjoyment of exercise, the challenge, and mastering an activity'.

Interesting stuff, and it all seems to make sense. Having a definite, validated biological age can surely only be motivating, fitness and lifestyle-wise. I can't do anything about my actual age plodding slowly but surely onwards, but an age based on my lifestyle choices, that's a different matter.

Two hours later I had been weighed, measured and had my blood tested (having fasted since the previous evening). My lung capacity had been gauged and blood pressure taken, my diet examined, flexibility recorded and stress levels indicated. And after that little lot I'd pushed myself to my limit with push-ups, sit ups and running 'beep' tests. By the end of the morning I was feeling about 80 years old, but a blueberry muffin soon perked me up and made me feel human

again. So, what was the result? I needn't have feared; after numbers were crunched and results fed into computers the news came in that my BioAge had shaved six years from my actual age. Fantastic, my body was now a member of Generation Y! Did this mean that my car insurance premiums would go up...?!

It had certainly been an interesting experience, and I was pleased with my new age. So, where from here? Perhaps if I added an extra run to my weekly training schedule and tweaked my diet a little I could be 8 years younger this time next year... Better not take that second muffin then.

For more information on BioAge testing, visit www.humanperformance.com.au/biological-age-testing.aspx and ask your personal trainer.

Source: WordStorm PR & Australian Fitness Network

Yoga builds balance confidence in older people

Recent US research has shown that instruction in hatha yoga can increase the confidence that older people feel in relation to falls.

Falling is a major health issue in the older population, and falls prevention programs are very important in helping people to remain active and independent into their older age.

Researchers from Indiana University studied 14 participants, both men and women, whose age averaged 78 and who voiced a fear of falls. Of this group, five had fallen previously. For twelve weeks the participants attended a one-hour hatha yoga class twice a week, delivered by a yoga therapist. Hatha is a gentle form of yoga which can be adapted for individual needs and be performed in a seated position. By the conclusion of the study the participants reported a decreased fear of falling, improved flexibility in their lower body and more freedom in their leisure pursuits. The reported fear of falling reduced by 6 per cent, while lower body flexibility was recorded as being increased by 34 per cent.

Marieke Van Puymbroeck, assistant professor in the Department of Recreation, Park and Tourism Studies in Indiana University's School of Health, Physical Education and Recreation, said, 'Our study found that yoga was a feasible intervention with older adults and that they perceived great benefit from it'.

Both the high 90 per cent attendance rate of the classes throughout the study period and the low dropout rate of 6 per cent were notable, said Van Puymbroeck. She noted that participants reported 'tremendous benefits' including the ability to apply posture principals to other situations, increased flexibility, increased range of motion and improved balance.

Source: Medical News Today

Mind body practice assists stroke patients

Individuals who have survived the debilitating effects of stroke can improve their impaired sense of balance by practicing the Chinese martial art of tai chi, according to a recent study.

The study was conducted by Christina Hui-Chan, professor and head of physical therapy at University of Illinois at Chicago, while she was at the Hong Kong Polytechnic University. In the study 136 participants who had previously suffered stroke were randomly placed in either a control group or a tai chi group.

The tai chi group learnt a simplified version of the practice which involves continuous coordinated movement of the head, torso and limbs and which demands great control and concentration. The control group practiced breathing, stretching and other walking, sitting, memorising and reasoning exercises.

The participants attended a weekly instructional class for twelve weeks and were also entrusted to practice for an hour three times a week at home, with the aim of making them as independent as possible treatment-wise.

At the end of the study, the participants had their ability to balance tested when shifting weight, leaning and standing on a moving surface. Members of the tai chi group exhibited greater balance skills in these areas than their control group counterparts. In a separate test which focused on sitting, standing, walking and returning to the seated position, both groups performed equally.

'The tai chi group did particularly better in conditions that required them to use their balance control. In only six weeks, we saw significant improvements. The ability to shift your weight is very important because all reaching tasks require it' said Hui-Chan.

Hui-Chan highlighted the other health benefits of tai chi, including increased strength and cardio fitness and said that group exercise classes teaching tai chi could provide healthy social gathering opportunities for older people; 'It can be taught at community centers, YWCAs or YMCAs, or in parks in the summer' she said.

Source: Medical News Today

Yellow pea protein for blood pressure?

A recent Canadian study has found that a protein in the yellow garden pea may be able to reduce blood pressure and delay or even prevent chronic kidney disease.

Approximately 13 per cent of adults in the US are affected by kidney disease, a notoriously difficult disease to treat. In Australia Chronic Kidney Disease (CKD) is a growing public health concern, responsible for substantial burden of illness and premature mortality. One in three Australian adults is at increased risk of developing CKD, and 1 in 7 Australians over the age of 25 have at least one clinical sign of existing CKD. Most people with kidney disease succumb to cardiovascular complications linked to high blood pressure.

Study lead author, Rotimi Aluko, an associate professor in the department of human nutritional sciences at the University of Manitoba in Winnipeg, said, 'What we seem to have here is sort of a natural approach to treating this disease, as opposed to the normal pharmacological approach. We're talking about an edible product, not a drug, which can help to reduce blood pressure and, at the same time, reduce the severely negative impact of kidney disease'.

The research focused on peas, which are known to be a cholesterol-free source of protein and fibre. For eight weeks the study team fed a purified mix of yellow garden pea proteins, called 'pea protein hydrolysate' to rats with kidney disease. The rats treated with the pea protein exhibited a reduction in blood pressure of 20 per cent, compared to a control group of untreated rats. Urine production also increased by over 30 per cent among the treated rats, another indicator of improved kidney function.

The authors did note however that in their natural form, yellow garden peas would not provide the same results, explaining that a complex protein purification process is necessary to activate the benefit. The positive results, however, have led to human trials of the protein.

Dr George Bakris, director of the hypertensive diseases unit at the University of Chicago, commented, 'This is not the first time that the secret to blood pressure control has been found in Mother Nature. Ten years ago, a substance was isolated in celery, for example, that also had a controlling effect. But here what they seem to have shown is that there is a substance in this pea, when cleaved, which works in a similar fashion to the ACE inhibitors that have been out for the last 25 years. So basically, they have a natural substance that works like standard drugs we know a lot about. Of course, we have to see what the human studies show, but if the results are as compelling as they were in animals, then this would potentially be a very reassuring, exciting and positive development as it is certainly very difficult to control blood pressure in people with kidney disease'.

Source: *HealthDay News & Kidney Health Australia*

Vitamin D may reduce fracture risk

The results of a recent meta analysis (combining the results of several studies) have indicated that vitamin D supplements are associated with a reduced risk of bone fractures in older adults.

Heike A. Bischoff-Ferrari, Dr.P.H. of the University of Zurich, University Hospital, Zurich, Switzerland, and colleagues found the reduced risk when oral vitamin D supplements were administered at a dose of at least 400 international units per day.

'The anti-fracture benefits of vitamin D have been questioned by several recent trials, leading to uncertainty among patients and physicians regarding recommendations for vitamin D supplementation. Factors that may obscure a benefit of vitamin D are low adherence to treatment, low dose of vitamin D or the use of less potent ergocalciferol (vitamin D2)' the authors wrote.

The meta analysis looked at 12 previously published clinical trials into the effects of oral vitamin D supplements in adults aged 65 or older. These randomised trials involved over 42,000 participants whose average age was 78, and focused on non-spinal fractures, including eight trials which looked at hip fractures.

The researchers found that vitamin D supplements decreased non-vertebral fracture risk by 14 per cent and hip fracture risk by 9 per cent. Focusing on the studies which involved supplementation of over 400 international units per day of vitamin D, the researchers found non-vertebral fractures reduced by 20 per cent and hip fractures by 18 per cent.

'The greater fracture reduction with a higher received dose or higher achieved 25-hydroxyvitamin D levels for both any non-vertebral fractures and hip fractures suggests that higher doses of vitamin D should be explored in future research to optimise anti-fracture efficacy. Also, it is possible that greater benefits may be achieved with earlier initiation of vitamin D supplementation and longer duration of use. Our results do not support use of low-dose vitamin D with or without calcium in the prevention of fractures among older individuals' the authors wrote.

Source: *Archives of Internal Medicine*

Sydney 2009 World Masters Games

The seventh edition of the World Masters Games, the major international multi-sport event at which everyday people can have extraordinary experiences, will take place in Sydney in October.

David Gyngell, CEO of Channel Nine, the Official Television Partner of the world's largest multi-sport event, said 'The World Masters Games are unique in that they provide everyone, regardless of their sporting prowess, with an opportunity to take part in a sports event on the big stage. Channel Nine is delighted to be associated with this year's Games in Sydney'.

Shane O'Leary, CEO of the Games Organising Committee, said that Channel Nine's support of the Games, particularly the participation of several of the network's famous faces, will help raise the event's profile to a whole new level.

'We warmly welcome Channel Nine to the Sydney 2009 World Masters Games family and look forward to seeing some of the network's stars competing against fellow sports enthusiasts from all around the globe over nine exciting days in October. It doesn't matter how good or how old you are. Everyone's invited to take part in this great festival of sport. The

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Sydney 2009 World Masters Games are all about being fit, fun and forever young. Don't miss out on your opportunity of a lifetime'.

Taking place between 10 and 18 October, the games, which are open to everyone rather than just elite athletes, are expected to see 25,000 people from more than 100 countries compete in 28 sports across 72 Sydney venues, including many Olympic sites.

Are you up for the challenge? Why not ask your trainer today about developing a program to get you games-fit?! Games registrations are open at www.2009worldmasters.com

Source: Sydney 2009 World Masters Games Organising Committee

Tough Bloke Challenge

In July 2009, men and women who want to prove their toughness will flock from all over to the outskirts of Sydney where a challenge will determine the toughest of them all. Unlike other endurance events in Australia, there will be no place for designer shorts or a pair of flashy runners, with participants relying solely on the guts and determination as they take on a race that is likely to be the toughest thing they will ever do.

Back for a second year, the hugely popular Tough Bloke Challenge is an off-road running event that combines the challenges of cross country running, man made and natural obstacles, water crossings, mud and some unexpected surprises. The challenge is simple, clear the obstacles and get around the course in as short a time as possible to be in the running for the coveted Tough Challenge Trophy!

'Running is the core discipline of the Tough Bloke Challenge but competitors should be prepared for anything .. and don't expect to be clean when you come out on the other side – the taste of mud and sweat will be familiar by the end of the day' said race director, Gary Farebrother.

The inaugural event in 2008 saw a sell out crowd of 600 participants take on the eighteen obstacles scattered around the course. The popularity of the inaugural event has forced organisers to expand the challenge into a two-day event, giving participants the opportunity to race on 4 or 5 July.

The event will be hosted from Cataract Scout Park, situated outside the township of Appin, an hour and a half from Sydney. The course is set amongst the native bushland of the area and will cover a distance of approximately 7km. The top competitors will clear the course in around half an hour with other participants taking up to two hours.

Contrary to the name, the event is also open to females in the 'Tough Chick' category and a range of age categories. Farebrother commented 'men and women of all ages have participated in the first Tough Bloke Challenge. The reality is everyone likes to get down and dirty once in a while! It's 100 per cent unadulterated fun, an opportunity to be a kid again'. Every participant who completes the challenge will receive a finisher's certificate and an opportunity at unlimited bragging rights!

The Tough Bloke Challenge will take place on 4 and 5 July, with competitors having the option to pick which day they want to compete. Entries are now open and can be completed online. To register, or for more information, visit the Tough Bloke Challenge web site at www.toughblokechallenge.com.au

Source: Maximum Adventure