Why she should lift: strength training female clients

TRAINING

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BUSINESS

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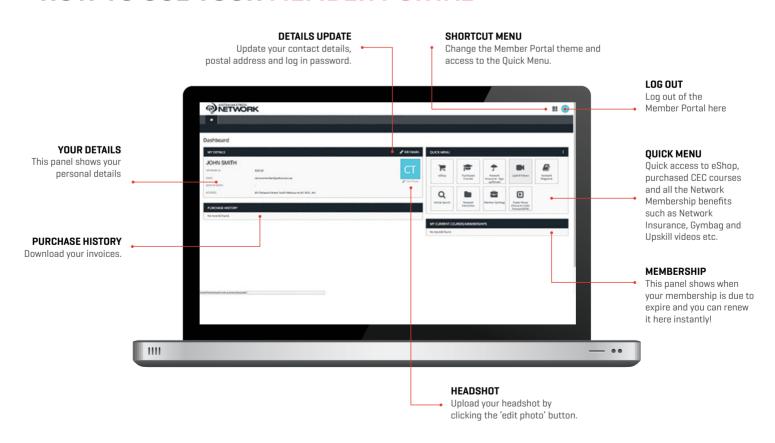
# INTRODUCING YOUR NETWORK MEMBER PORTAL



Did you know the new Network website features your own personally tailored Member Portal?

Inside the portal you can change your contact details, quickly access all your Membership benefits from a shortcut menu, renew your Membership, sign up for Network Insurance, download invoices and access any CEC courses you've purchased (including the quarterly free ones which will automatically appear in there).

# **HOW TO USE YOUR MEMBER PORTAL**



# To the past, the present and the future!



At the Opening Ceremony of the recent FILEX fitness convention, the Network team surprised the company's directors, both current and former, Nigel Champion, Lisa Champion and Greg Hurst, with an unexpected presentation and celebration of Network's 30 years of leading the way for the Australian fitness industry.

A lot changes over three decades, as the image on page 11 of the very first issue of this publication - then an aerobics newsletter - proves. And the evolution continues. The copy of Network magazine that you're reading now will be the last printed issue, as we transition to delivering our content exclusively online.

We've been increasing our digital presence in recent times, with our newly expanded and improved Upskill videos, The Fitness Industry Podcast, our revamped website and Member Portal, ever-growing library of continuing education courses, and of course the magazine app, where you can access this, and back issues, at any time, on your phone, tablet or computer. If you haven't done so already, I encourage you to download the Australian Fitness Network Magazine app from the App Store or Google Play.

As Greg said in his welcome note all those years ago, 'the industry is forever changing', and so are those that service it, including Network. While there's poignancy in farewelling print, it's also exciting to embrace new ways of delivering enriched content and resources to you, our members.

There's no denying the fact that we live in an online world, one that we could never have envisaged three decades ago when Network was founded. As we turn 30, we celebrate Network's history and raise a glass to its future.

Cheers!



Oliver Kitchingman, Editor editor@fitnessnetwork.com.au





'To inform, inspire and educate our members to be the best they can be'

#### **EDITOR**

Oliver Kitchingman

Network magazine is the official quarterly publication of Australian Fitness Network. It is distributed in March, June, September and December. While every effort is made to ensure accuracy, Australian Fitness Network accepts no responsibility for the correctness of any facts or opinions. All information including prices (quoted in AUD) is correct at time of publishing, but may be subject to change. Where CECs are stated, they may only be applicable within Australia. We welcome articles from all industry professionals on the understanding that the author ensures the work they submit is their own. No material in Network magazine may be reproduced in any form without the written consent of the publisher. © 2017 All material copyright to Australian Fitness Network, All rights reserved

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Unless otherwise specified, all competitions/giveaways contained in this issue commence on 12 June 2017 and conclude on 28 July 2017. Each competition is a game of skill and chance plays no part in determining the winner. The judge's decision is final and no correspondence will be entered into. Winners will be selected by the editor at 47 Hume Street, Crows Nest NSW 2065 and will be notified by email no later than 17 August 2017. Full terms and conditions can be obtained at fitnessnetwork.com.au/competition-terms-and-conditions

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Fax: 02 8088 3842 Post: PO Box 577, Crows Nest, NSW 1585 Weh: fitnessnetwork.com.au 47 Hume Street, Crows Nest NSW 2065 E-mail: info@fitnessnetwork.com.au 1300 493 832 (local call rate)

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Your Network Membership prov you with access to 8 CECs or 1 PDP annually at no extra cost.

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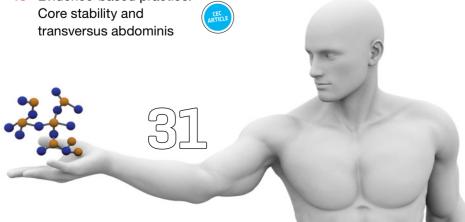






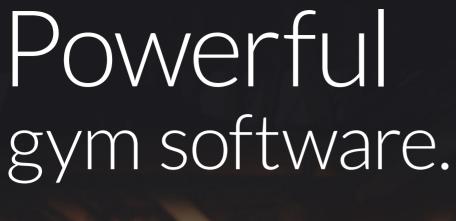
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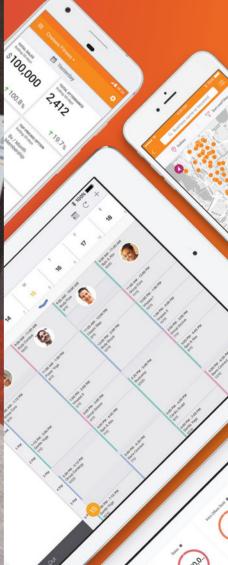




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# FILEX 2017 IGNITES, THE Passion

Our industry's premier event delivered world class professional development to thousands of fitness professionals.



t the recent FILEX 2017 fitness industry convention, held at the stunning new International Convention Centre (ICC) Sydney, thousands of fitness professionals, business operators and industry suppliers embraced the opportunity to recalibrate, take inspiration and set new personal and professional goals for the months and years ahead.

After the annual pre-convention Business Summit, FILEX kicked off with a heart-warming Opening Ceremony in which Network's three decades of leading the way for the fitness industry were celebrated, the Fitness Industry Awards were presented, and Lisa McInnes-Smith

delivered a hilarious and motivating Keynote which set the tone for a fantastic weekend of learning and development featuring over 150 world-class presenters and more than 230 sessions, as well as the Women of Influence Lunch and the PT and Business Breakfasts.

Held alongside FILEX, the inaugural Ignite Yoga Summit was an inspiring celebration of the diversity of the Australian yoga community. Over 120 yoga teachers attended three days of growth, sharing and learning. Expertly led by global presenters, including Tiffany Cruickshank, Thomas Myers and Chanel Luck, Ignite 2017 laid the foundations for what looks set to be a strong future.







**Amy** 

Thanks for an unforgettable event! It well and truly exceeded ALL expectations! Everyone was so friendly and helpful too!







Hays

An amazing effort by all Event Crew. Our team are extremely grateful for the wonderful support during our presentations. Many thanks.













**Michelle** 

It was a wonderful experience and everyone was so professional.

Jason

You did an amazing job – I was truly honoured to present at FILEX this year! I hope I can come back and bring some more unconventional training methods next year!

Margaret

Thank you - Business Summit was a great day and now to put it all into practice over the next 12 months until next year!

Elissa

Perry Nickelston really is brilliant – thank you!







Tanya

Congratulations on another amazing FILEX. So glad I attended. Once again I have returned to work motivated and really confident with our modelling for both our business models. ... I am really pumped to be in such a great, expanding and exciting industry. Thanks again.

**Kyle** 

Thanks for what was an incredible schedule at FILEX.

Carolina

It has been amazing! Thank you for bringing Anatomy Trains!

Rebecca

There's something magical about attending a FILEX convention and 2017 added a touch of nostalgia, celebrating Network's 30 Year Anniversary. The experienced staff make running a complex event look easy. FILEX is known as one of the best fitness conferences in the world and it's a testament to the efforts of each and every member of staff who has helped the event become what it is today. Thanks for all the years of inspiration & education!







ignite SYDGA SUMMIT

Nat

Thank you Ignite for an amazing, inspiring weekend and thank you to all of the wonderful delegates for sharing their passion and wisdom! Forever grateful. Namaste.

Gael

What a cracker weekend! There was soooooo much to love about the entire experience, thank you!







**SAVE THE DATE** 

**FILEX 2018** 20-22 April 2018, ICC Sydney

# PERSPECTIVE

## REFLECTIONS OF INDUSTRY LEADERS

FILEX's Keynote Speaker and performance expert looks at how to build your leadership effectiveness and make yourself worth following.

**WORDS:** LISA MCINNES-SMITH



t was such a privilege to help celebrate 30 magnificent years of leading the way by Australian Fitness Network during FILEX 2017. The event was fabulous, and so were all the attendees (thanks for your glowing response to my presentation!)

So how can we, as individuals, take inspiration from this sort of leadership and grow our own influence and team building skills? Leadership effectiveness can be significantly improved with a little daily practice and perseverance.

First, be a person who is fun to work with and to be around. No one wants to team up with someone who has no sense of humour or fun. No matter how important the job is, life is more enjoyable when we work with people who are a pleasure to be around. Smile often and show teeth! Do not underestimate the power of pleasantries. Expect your team to use them.

Next, be a person who takes risks and participates at every opportunity. Those who get involved at all levels of their business develop conscious competence as well as connection. They take action rather than procrastinate or spectate. People who take the lead, fast track their own growth because their weaknesses and strengths are quickly revealed to themselves. When you participate, it helps people to know you and grow with you. Trust is built when you are willing to put yourself in a position where everyone knows you could end up looking foolish. In reality, you are modelling how to lead.

It is critical to learn to speak nicely to yourself, about yourself. The self-talk of leaders is an integral part of their success. You must be able to encourage and affirm yourself even when others criticise or stay silent. The most powerful words you will ever hear in your whole life are those you say to yourself, about yourself. You speak hundreds of words to yourself throughout the day, so make them count for good. Then

practice on others.

Next, apply focus to the areas where you want to grow. Multi-skilling is a useful talent to have, but to improve quickly you need to focus. Practice focused thinking and putting all your energy on one aim until you bring about significant change. Progress comes in lots of incremental steps on a regular basis.

Finally, coach yourself and one of your team on a weekly basis. Repetition builds skill, competence and confidence. Keep your comments specific and encouraging. Good leaders are good coaches. Don't score keep – coach! Remember how fascinating you can be! We are all works in progress. N

Lisa McInnes-Smith is a dynamic, internationally recognised keynote speaker and bestselling author who has presented to over two million people globally and shared the stage with two American Presidents. With a background in sports psychology and high performance, she empowers everyone she encounters to 'lift their game' and contribute their talents to society. Iisaspeaks.com

"

# $Progress\ comes\ in\ lots\ of\ incremental\ steps\ on\ a\ regular\ basis.$

"

# 5 attributes that make you worth following

# 1. Knowing your values and articulating them to others

Have 'A Code To Live By' and 'A Code To Lead By' that you are happy for others to view.

#### 2. Having a vision and a mission

Help people to 'see' and 'feel' the future before it's even created. Use your words to paint pictures of how the future is going to look.

# 3. Genuinely relating to and engaging with others

Learn to communicate regularly and personally. Teams are built one relationship at a time. Build trust and attempt to pre-

empt the needs of your people at work before they ask.

#### 4. Encouraging problem solving

Help people to see that they are either part of the problem or part of the solution. Encourage them to innovate and initiate new ideas and to communicate those ideas with conviction.

#### 5. Being a decision maker

Empower others to make decisions also. People who don't make decisions don't make many mistakes, but they don't make much progress either. Decisions are necessary to move ahead and to create a better future. We learn from our mistakes as we go.

9 CECs

# Gateway is the perfect introduction to teaching Pilates

Network has partnered with Polestar Pilates to offer Fitness Professionals the chance to add Pilates to their practice. Network members earn CECs and save \$25 with the link below.





fitnessnetwork.com.au/courses/gateway-pilates

# INDUSTRY INSIGHT

News, views and lessons learnt



At the recent FILEX 2017 fitness industry convention, Australian Fitness Network celebrated three decades of leading the way in the fitness industry.

During the event's Opening Ceremony, Network's CEO, Ryan Hogan, took the company's directors by surprise when he went off-script to present an emotive film celebrating their achievements over the past 30 years. Nigel Champion, Lisa Champion and Greg Hurst accepted a bespoke 30<sup>th</sup> Anniversary book to commemorate the occasion, as an auditorium packed with their industry peers and protégés gratefully acknowledged the impact that their leadership has had on the Australian, and global, fitness scene.

From the vantage point of 2017, where fitness pervades all aspects of our lives, from wearable tech and Instagram fitspiration to reality television, it's easy to forget that 'fitness' hasn't always enjoyed such a high profile.

In 1987 the fitness 'industry' in Australia was in its infancy. Along with old-school boxing gyms and sports clubs, 'exercise to music' classes were springing up in community halls, inspired by the Jane Fonda-led aerobics explosion in the US (see Nigel's feature on the facing page).

While there was boundless passion on the part of those

teaching classes and running gyms, there was no coherency of message, standard of qualification, or opportunity for professional development.

The need for a leader with the vision to unite, support and develop the industry in a way that would benefit both those working in it and those they served – the Australian public – was met by the team that created The Fitness Leader Network, as it was originally known.

Since its formation thirty years ago, Network has played a pivotal role in equipping the nation's army of fitness professionals with the qualifications, skills and confidence to become the diverse and mature industry that it is today.

Throughout FILEX 2017, which was held at the brand new ICC Sydney after its 3-year relocation to Melbourne, members of the industry, both old and new, overwhelmed the company's directors with their congratulations and expressions of gratitude. From stories of lifelong careers inspired and enabled by Network, to personal health and life transformations, the influence of the fitness industry's leaders was evident for all to see.

Watch the film and view the online version of the book commemorating Network's 30 years of leading the way at **fitnessnetwork.com.au** 

# The way we were...

In March 1988, just a few months after Nigel Champion, Garry Egger and Greg Hurst founded Network, we published our first issue of this publication. Before it became a magazine, however, it was a newsletter focused firmly on developments in the new world of aerobics. Welcoming readers to the



newsletter, which reported on the 1987 Reebok National Aerobic Championships and promoted Network's second ever event, 'Network 88' in Surfers Paradise, Greg wrote:

"Welcome to the very first issue of Network News, the complimentary aerobic newsletter for members of the Fitness Leader Network (FLN). This up-tempo newsletter has been created specifically to meet the needs of instructors and others involved in the Australian fitness industry.

...The aerobic industry is forever changing and growing, and fitness leaders are always asking how they can keep up to date. If you've ever wanted to know "What's happening??" then Network News is for you – we hope you enjoy it."

# 1thing I've learnt

# Lisa Champion, former Network Director, Counsellor & Psychotherapist, champion.net.au

"30 years ago I was in my late 20's and still feeling as if raw energy, determination, enthusiasm and hard work were the keys to success in both my personal and professional lives. As the decades have rolled on, and I've weathered highs and lows along the way, the thing I have learnt that has made the most difference to me is to have selfcompassion. Life feels much more balanced and grounded having found a way to accept myself through times of both high and low energy. times when I've felt super-determined to work towards a goal and times when I've let myself rest and re-charge. I don't have to be endlessly energetic and determined to be successful. I don't have to put on a facade. I can just be who I am and, through the lovely lens of selfcompassion, feel good about myself. We all fall down at times, we all have highs and lows and when we can accept ourselves and be honest with others through these times, we develop more authentic and genuine relationships - and that is absolute gold."



# Looking back at where it all began...



Until the late sixties, the idea of exercising for good health and wellbeing was virtually non-existent. Then, former US Navy doctor, Kenneth Cooper, wrote a global bestseller in which he coined the term 'aerobics' and explained that the more the human body moves, the better it performs. This was the catalyst for the jogging craze that commenced in the early seventies.

At this time, fitness clubs focused on traditional strength training and body building, which created a very intimidating environment for women to train in. Then, in the mid-seventies, along came a workout format that ticked all the boxes. It was cardiovascular, it had strength and flexibility components, it was performed to popular music – and most importantly it was fun. This format took on Cooper's term 'aerobics' and with the release in 1982 of 'Jane Fonda's Workout' videos it became a worldwide fitness phenomenon. In Australia, aerobic classes were held in church and community halls, Surf Life Saving Clubs, and, eventually, fitness clubs.

Most of the early aerobics instructors came from dance backgrounds, and as such had little training in human movement. The result was a high incidence of injuries, including shin splints, back problems and vocal cord damage. Enter Australian Fitness Network to provide the training, music, resources, continuing education and conventions to equip thousands of instructors with the skills to deliver safe and effective classes.

By the mid-nineties aerobics saw a steep decline in class numbers. The reason was simple: instructors were teaching to the dedicated front row who wanted ever more complex moves, leaving newcomers and the less co-ordinated floundering at the back. In the late nineties, Network launched a class that used a barbell in a rigid pre-choreographed format: the original Body Pump class. This re-ignited the 'aerobic room' and kick-started the incredible global success of Les Mills International.

In the early 2000's the term 'aerobics' was losing its appeal and was replaced by 'group exercise', which encompassed everything from HiLo, step and freestyle, to pre-choreographed, cycle and boxing. Around 2005, the Latin American inspired Zumba movement took hold. This was quite different to the Les Mills offering, as the business model was based on the instructor, rather than the club, buying a license. It proved a huge global success, with many Zumba instructors going back to where it all started – teaching classes in community halls.

So, where's group fitness today? Freestyle and prechoreographed classes still form the core of the timetable, but small group training formats such as functional training, boxing, Pilates, and HIIT are gaining popularity. The introduction of virtual classes, immersive workouts and home video streaming are also getting some traction. But no matter how good the technology is, aerobics/group exercise will be around for many years to come, as people will still want to exercise with others in a fun and supportive environment, just as many discovered they did 30 years ago.

Nicel Champon

**Nigel Champion,** Executive Director director@fitnessnetwork.com.au



By incorporating strength training into your female client's programming, you can help her improve functionality and defend against injury while achieving her goal physique.

### **WORDS: SUSY NATAL**

or many years, women were encouraged by fitness professionals to focus on aerobic exercises and were not typically recommended resistance training. There was a fear that women would become 'excessively' muscly if exposed to weights, in particular heavy weights, and this type of training was usually not deemed necessary for females. Apart from generally being

smaller in build, however, the musculoskeletal system of males and females is almost identical, so it makes little sense to assume that they would have such divergent needs.

More recently, research has demonstrated that women can obtain many benefits from weight training, and that they will not easily become 'overly' muscular. The shift in thinking has seen strength training increase in popularity among women. Even government guidelines recommend a minimum of twice-weekly muscular strengthening exercise, with no differentiation between the sexes. These are all important factors to bring up with a client if she is apprehensive about commencing strength training.



#### The incredible bulk?

Clients can benefit greatly from being educated about body composition, and on the differences in density between muscle and adipose tissue. Some clients may cite anecdotal 'evidence' of someone they know who became so much bigger after starting strength training. In this situation it can be helpful to point out how strength training can increase hunger, and that if somebody is increasing their calories drastically then they may increase their body fat deposits in addition to gaining muscle, which will definitely make them look larger. If, however, the same individual were to eat the correct amount to maintain or even lose body fat, then this 'bulkiness' as it is typically named, will not eventuate.

As strength training has increased in popularity, cardio has been unfairly demonised by many health and fitness professionals and media platforms. Cardio is beneficial, and a combination of both is





#### The 30-second article

- Strength training for women is still a relatively new concept, but knowledge and interest is increasing
- Some women still worry that they will gain too much size, but this outdated idea is disappearing
- Strength training can improve physique through promoting muscular hypertrophy and fat loss
- It also helps to prevent injury to muscles, other connective tissues, joints and other bones
- A strong body can more safely and effectively complete functional movements, and helps make many day-to-day tasks easier to complete.

likely to be ideal for most clients. Working on cardiovascular health will not only assist in the prevention of heart problems, but also help trim down body fat deposits, therefore avoiding the dreaded 'bulky' look.

#### The XX factor

The ability to put on size is somewhat genetic, and there will always be some unusual cases where a female can increase muscle mass with much greater ease. These, however "

# As well as being physically empowering for your client, strength training also creates a greater sense of capability and independence.

"

are very uncommon, and the greatest factor playing a role is sex – female sex hormones very specifically hinder the ability to gain excessive muscle, something that even most males find quite difficult to achieve! Even females who can gain muscle more easily need not be fearful though, as muscle takes time to build and will not appear overnight. Rather, it will gradually increase, meaning that training programs can be altered according to these changes over time.

#### The health effects

Strength training will lead to more muscle, which can increase an individual's resting metabolic rate. This, together with the training itself, can help decrease body fat, and along with it the many health risks associated with a sedentary lifestyle, such as diabetes and heart disease. This lifestyle is also responsible for many postural issues, chronic pain, and injuries resulting from having a body that is no longer functioning properly. Increasing the strength of individual muscles and functional movement patterns can help combat some of these issues.

#### The physical effects

Rounded shoulders stemming from a weak rotator cuff and upper back muscles, non-specific lower back pain stemming from inactive and underdeveloped glute muscles, weak core muscles and sore knees stemming from imbalanced and weak thigh muscles are some of the most common issues in bodies that are too inactive and weak. If your client suffers from any of these problems, then strength training will improve their overall health and quality of life.

A strong body moves and holds itself in proper form, and so can help alleviate prior pain caused by weakness and imbalance. Additionally, strong bodies can stand more stress being placed upon them without running as great a risk of injury. Strength training makes a body generally more capable, which can also make an individual feel good. Above and beyond just fixing an aching and slouching body, everyday tasks such as carrying the shopping, opening jars or doing the gardening become easier and more comfortable. As well as being

physically empowering for your client, this also creates a greater sense of capability and independence.

A strong body is also more resilient to a major concern among older women, osteoporosis, which affects almost a quarter of women over the age of 50 in Australia. While your client may not worry about this yet, it is important to think ahead, particularly if there is a history of osteoporosis in the family. Strength training can increase bone density, and so can help to prevent or lessen the severity of osteoporosis for your client.

#### **Necessary precautions**

When embarking upon a strength program with clients that have pre-existing injuries, it is prudent to speak with the allied health professional managing their injury in order to clearly understand any contraindicated training movements or fitness equipment.

It is also important to remember that no specific amount of strength training is right: it is highly individual. Greater training experience will mean that your client has a larger work capacity, and so can safely perform more strength training than a beginner. Similarly, clients who sleep more or implement more recovery techniques can also safely train more. However, time constraints and other commitments for the individual will usually dictate how much strength training they actually undertake.

Our bodies are supposed to move and to be able to withstand external stressors, so every body, of both genders, has much to gain from strength training. **N** 

Susy Natal is a Sydney-based performance coach, wellness writer and personal trainer with a background in psychology. She works with a varied clientele, from beginners through to competing athletes across multiple sports. susynatal.com

#### MORE?

Check out 'Research Review: Women need iron (the non-dietary variety!)' on page 28.



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# mSwing

# THE RISE OF THE SMILING MOVEMENT!

Backed by science, and developed with happy hearts, a new light weight, free movement workout delivers plenty of smiles as well as results.



# The 30-second article

- mSwing uses a single dumbbell or other object weighing no more than
   5kg – and natural, flowing movements to provide a fun and challenging workout for groups or individuals
- The movements employ the principles of load sharing, force transfer, energy storage and elastic release to allow a load to be safely handled through a wide variety of movement pathways
- mSwing improves cardiovascular fitness, muscle strength and elasticity, joint mobility, and skill and co-ordination, and is safe for all ages and fitness levels, pre- and post-natal exercise, and for the pelvic floor and bones and joints
- The moves are adaptable to people of all abilities within the same group, and everyone can work at their own pace.

to allow a load to be safely handled through a wide variety of movement pathways. Movement of the head and changing the level and orientation of the body in mSwing stimulates the vestibular system in a way that improves movement precision, facilitates skill development, increases attention and improves balance reflexes and memory. The combination of rotations, unloaded and momentum-driven body positions safely mobilises the nervous system, improves joint compliance and disinhibits restrictive muscle tension.

### The equipment

Dumbbells work best, but you can use anything you can hold onto and swing. For example, you could use weight plates, water bottles, sticks, garden gnomes, vegetables... or even nothing at all. The minimum load is nothing and the maximum load is 5kg.

### What are the benefits?

mSwing will make your participants better movers because it:

- improves cardiovascular fitness
- improves muscle strength and elasticity
- improves joint mobility
- improves skill and co-ordination
- is safe for all ages and fitness levels
- is safe for pre- and post-natal exercise
- is pelvic floor safe
- is bone and joint safe.

# Who is behind mSwing?



mSwing has been developed by Marietta Mehanni, an expert in group exercise, and by physiotherapist Mark Davis. Marietta and Mark have over 60 years of fitness industry experience between them. They developed mSwing with the intention of making a fun and effective movement experience accessible to as many different people as possible.

mSwing classes are currently being conducted with a diverse range of participants, including older adults, athletes, kids, intellectually and physically challenged, pre- and post-natal, as well as regular gym goers, all in the same group.

So, what's the 'm' in mSwing? It stands for mobile and momentum (and, yes, for Marietta and Mark as well!)

## Who can participate?

Anyone. The moves are adaptable to everyone in the same group, so every level is catered for. Everyone can work at their own pace, and they can choose the intensity that suits them best. In a nutshell, every participant will get a great workout.

## What are the key movements?

There are three key mSwing moves:

- Swings
- Pivots
- Rebounds.

#### Swings

- Keep the swinging arm nice and loose.
   This allows you to work elastically and transfer force with minimal effort.
- The legs track the path of the swinging arm in a pendular arc. This arc makes the path of a big smile – which is why mSwing is called the smiling movement!
- When the dumbbell goes up, the legs straighten – when the dumbbell goes down, the legs bend.

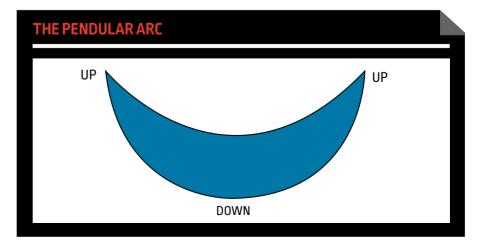
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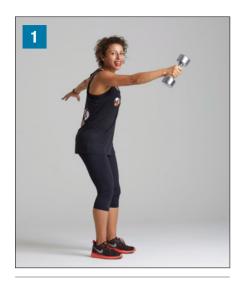
Pivots ensure easy force transfer

- whenever a swing moves through the transverse plane.
- In a pivot, the force travels with the weight, instead of getting caught in your back
- To pivot, simply allow the lower limbs to follow your pelvis.
- The pivoting leg will unload naturally as you lift your heel and pivot off your toes (the same thing happens with your trailing leg at the end of a step in walking)
- Whenever the trunk turns, there is a rotation. Whenever there is a rotation, there will be a pivot.

#### Rebounds

- Rebounds occur when the load moves in a down-up or up-down path, as opposed to a pendular arc. The weight moves as it would in normal resistance training
- mSwing classes incorporate whole body movement. When the weight travels down, the legs bend a little to go down with it. This is the rebound action.
- Rebounds allow gravity to be worked with. Rebounds also keep the movement safe for your back.





Top of forward arc – hips, knees straighter. The weight is light.



Bottom of arc – hips, knees and ankles more bent. The weight accelerates off the bottom.



Top of backward arc – hips, knees straighter. The weight is light.



Trunk turns (R) so (L) heel lifts and leg pivots.



Trunk continues (L) so (R) heel lifts and leg pivots.



Weight is up, centre of gravity goes up - so legs are straighter.



As weight goes down, the legs follow.

## How can you teach mSwing?

Instructor certification for mSwing is via a one-day workshop covering mSwing theory, the movements, teaching and class design. Workshops are held throughout Australia and New Zealand, and for those unable to attend a workshop, an online certification is available. Once certified, there are no ongoing upgrades and no mandatory music: you're good to go. There are no license fees for venues either – mSwing classes simply need a certified instructor. mSwing makes promotional material available to venues and instructors, free of charge. Visit mswing.com.au for details. **N** 

Mark Davis, BAppSc (Physio), BEd (PhysEd) is a physiotherapist with an extensive background in gym-based rehabilitation and over 30 years' experience in the fitness industry. A former master coach with the Australian Institute of Fitness, he has been involved with the preparation of thousands of fitness professionals. mswing.com.au

Marietta Mehanni is an award winning presenter and Australian Fitness
Network Ambassador with over 30 years' teaching experience in both land- and
water-based group exercise. She is also an instructor mentor, World Master
Trainer and education coordinator for Gymstick International and Pelvic Floor
Ambassador for Continence Foundation Australia. mariettamehanni.com





time role managing the health club. This varies, but can be up to 10 hours per week, depending on my workload.

## What hours do you work?

Most days I work from 9am to 5 or 6pm. I still do one late night a week by choice. Regular hours are a rarity in this industry, so I'm fortunate. In the past I spent many years doing the early 5.30am starts and late evenings, often up to 9.30pm, as well as split shifts.

# What do you do in any downtime? As a full time employee I don't really have downtime. When I do have a spare moment I fill it with exercise, which helps clear my

# 1 How long do your clients stay with you?

mind as well as keep me fit and healthy.

Some of them for several years. My longest client has been with me for about seven years.

## ? How do you get new clients?

Usually I get new clients through word of mouth recommendations, or people see me training other clients in the club and approach me.

# Do you vet clients before you agree to train them?

Yes always. It's often just an initial chat to see where they are at, what they would like to achieve and to just listen to them.

# Oo you ever turn clients away or refer them to other PTs?

Yes I do, but for good reason. Part of my role overseeing the personal training program is to promote it and set people up with the most suitable trainer. Sometimes it's just a time factor for me. We have some excellent trainers in our health club with varying skills





and personalities. I try my best to match people up based on those qualities.

# What differentiates you from other trainers?

There is the 'art' of personal training and the 'science' of personal training. I have always believed that there is more to being a good personal trainer than just having good scientific knowledge. I have a little of both – I get on well with most people, that's part of the 'art', as well as having built up a lot of technical knowledge over the years.

# What do you do in terms of your ongoing education?

I regularly attend workshops run by my current employer or from external providers. I try to get to FILEX as often as I can. I love learning about the latest trends and new things about health and fitness. There's always something new to learn in this industry.

# What is the best thing about being a PT?

Having the opportunity to help people achieve things they often didn't think they could. Not just physically, but psychologically as well. It's gratifying to be part of that process.

#### And the hardest?

It can be hard work and sometimes a little mentally exhausting. It's not always as exciting as some people make it out to be. But I have come to realise that the good days way outnumber the bad.

# • What's the biggest misconception about working in fitness?

That it's all playtime and workouts! The reality is that sometimes you spend so much

time in the gym looking after other people that your own health and wellbeing can take second place.

# Where would you like your career to take you?

It's already taken me from PT to this coordinator role, so there are career pathways. Who knows what's next – I'm always open to new challenges! It might involve further developing my trainer mentoring and development role.

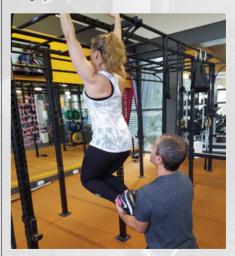
# What is your fitness philosophy?

Find something you like doing. If you don't like running on a treadmill and would rather be swimming, then go for a swim. I believe being healthy is more than just having a hard toned body. Exercise is the most potent and underutilised anti-depressant and it's free. Get out there and just move – I can guarantee you will feel better for it.

# What advice would you give to someone starting out as a PT?

Something I learnt through my martial arts training is 'Never forget the mind of a beginner'. Remember how nervous you were when you first started out as a trainer – and you're someone who loves exercise. Imagine how a new client would be feeling on their first day or session.

Smile, be friendly and listen. It's their session and it's about them, not all the things you can do or have done. **N** 



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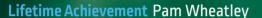


# **AUSTRALIAN FITNESS NETWORK'S**

# **2017 AWARD** WINNERS

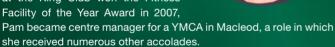
The 2017 Fitness Industry Awards acknowledge hard work and inspiring stories.

uring the Opening Ceremony of the recent FILEX fitness industry convention, Australian Fitness Network acknowledged the tireless efforts of those individuals who go above and beyond to lead the way in their respective fields. In front of a vast audience of industry peers, four awards were presented to very modest, but very deserving, winners, by Network's Executive Director, Nigel Champion.



After taking part in her first aerobics class in 1986, Pam was hooked on exercise, and made the decision to discover her inner teacher, leading her first class at a small gym the very next year.

In the mid 90's, Pam commenced personal training at the King Club in Melbourne. After she and her team at the King Club won the Fitness Facility of the Year Award in 2007,



Pam is now working to expand the YMCA's reach to support people who are ageing and experiencing disability. Very much a quiet achiever, Pam has played an instrumental role in numerous programs that have enhanced the lives of countless Australians.

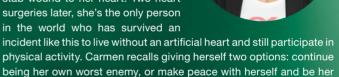


# **Inspiration** Carmen Holder

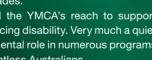
Zumba® Fitness Instructor Carmen survived her own suicide attempt and now, through her 'Dare to Live' initiative, offers her story to inspire others who have lost their fire for life.

In 2014, Carmen experienced a deep depression, which resulted in a suicide attempt involving a stab wound to her heart. Two heart surgeries later, she's the only person in the world who has survived an

own best friend.



Today, Carmen works as a photographer, Reiki healer, and masseur, and is back teaching Zumba® Fitness and enjoying every minute.



## Presenter of the Year Andrew 'Chaddy' Chadwick

Starting in the fitness industry in 2003, Chaddy landed his first role in a corporate training environment. From there he worked in gyms and coached his AFL Queensland club, in addition to handling their strength and conditioning. In 2007 Chaddy took on his first presenting role with Perform Better, delivering continuing education courses for BOSU and ViPR.



In 2012 Chaddy started working with TRX, to which he credits much of his development as a presenter. Through this association he became a part of PT Academy, Trigger Point Performance, PTA Global, the Functional Training Institute and Hyperwear SandBells.

Chaddy's professionalism, dedication and sheer hard graft have made him a firm favourite with FILEX delegates.

#### Authors of the Year Professor Mike Climstein & Joe Walsh

Professor Mike Climstein has been sharing his medical and fitness expertise with Network Members for more than two decades. Every three months, he and his colleague, Joe Walsh, sit down to chew the fat on recent fitness-related studies in order to produce their quarterly Research Review for this magazine, a feature that always generates a series of inquisitive emails to the



guys, eager for any additional insights and advice they may have.

In an era of 'alternative facts', to which the fitness industry is not immune, the importance of the type of work done by Mike and Joe is greater than ever, and Network is tremendously pleased to acknowledge this.

Read Mike and Joe's latest Research Review on page 28



# WINTER 2017

# **GROUP EX. MIND BODY AND TRAINING INSPIRATION**

This quarter's release is all about the core. Read these overviews and then watch the videos in the Network Magazine app or at fitnessnetwork.com.au/upskill

# **Core consumption**



The cooler months are upon us, and for many people that brings a decrease in motivation and an increased desire to stay indoors lounging on the couch. When we do this too much, our core muscles do not have to work or engage, resulting in poor posture, which can result in aches and pains, stiffness, pins and needles and even headaches. For this release, I worked with my amazing presenting team to create new, fresh and inspirational sequences, choreography and training techniques that will work the core muscles for the purpose of improving posture. This is part one of a two-part series, so keep an eye out for the 'sequels' next quarter!

I would like to thank our friends at Elixr Health Club

Bondi, TRX Training Sydney and Primal NRG Fitness in Sydney for their support - and you, Network's members, for your feedback, which is crucial. Please email me to let me know what you like, and what you want to see more of, to help you develop your skills and become the best fitness professional you can be.

See you next quarter!

Steph

Stephen Parker, Upskill Coordinator upskill@fitnessnetwork.com.au





TRX with Brendan Tuck

The active plank develops uniquely beneficial core strength that translates to almost any activity. Unlike crunches and sit ups, the plank protects the spine by bracing to maintain stability, resist rotation and transmit strength and power to the arms and legs. During planking exercises, focus should be on maintaining neutral spine and total body tension to enable mobility at the extremities. Rotational exercises should mimic cylindrical rotation of the torso to minimise risk to the spine, and generate hip power transmitted through the torso, using mobility in the hips, shoulders and thoracic spine.





bodyART with Robert Steinbacher

A major focus of bodyART is myofascial training, which assists a body mind connection while training cardio, strength, core, balance and focus. bodyART incorporates a focus on the four main myofascial lines: front, back, lateral and spiral. This unites with the five elements of Chinese medicine and a unique mix of cardio and strength to create a truly neuro-athletic workout like no other. In this video, Robert focuses on the spiral and front and back myofascial lines. bodyART Level 1 Training is taking place in Melbourne in July, and in Sydney in August. For details of the training email mrcsirwin@gmail.com. Download free bodyART workshop videos at bodyartmedia.com/Download/ MobileFreeVideos and Like bodyART Australia on Facebook





**KETTLEBELLS** with Dan Henderson

We now know that the best way to train the core is as a set of stabilisers. Many people have weak lateral core strength, which is needed to lock the pelvis to the core in order to maintain quality of movement. This is particularly important in sports that demand agility. Exercises such as kettlebell walks and halos strengthen the lateral core, minimising energy leaks and enhancing performance. Training the body to resist movement while challenging stability in all three dimensions (the renegade row in the video) is paramount in strengthening the core.





**PILATES** with Wendi Carroll

One of the most common core training exercises is the plank. This video showcases a few variations done on the Pilates Reformer Often, the exercises are done with hands on the foot bar, but this can cause wrist soreness for some clients. That's when you can use the long box and allow your client to rest on their forearms like a traditional plank. Change the springs to add resistance or assistance as needed and your client will be aware of their core for days after the workout!





**FREESTYLE** with Kirsty Nield

Gone are the days of doing hundreds of crunches to work the abs. This combination promotes core activation by being upright and using high intensity moves to keep the heart rate up. Perfect training for athletes and players on the sports field, the focus is on all the muscles in the mid-section to promote great technique, safe movement and injury prevention. Explosive moves, and fastthen-slow movements train the body in a functional, interesting and interactive way. By really emphasising the slow movements, the transverse abdominals are pushed into overload to maintain balance and technique.





**AQUA** with Dominic Gili

There is no better challenge to core strength than exercising in the unstable environment of the water. Founded in Newton's three laws of Inertia, Acceleration and Action/Reaction, exercising in the vertical position offers multidirectional resistance requiring us to constantly refocus our efforts to maintain neutral spinal alignment and optimal trunk stability by engaging and working core muscles. Program dynamic grounded and suspended movements in the water where the core assists in the transfer of load and force via arms and legs, and introduce anchored unilateral movements to allow clients to focus their attention.



# PRESENTER PROFILE: KIRSTY NIELD

A Group Fitness Manager, instructor and presenter, Kirsty is passionate about making people fitter, healthier and happier. Starting as a freestyle instructor in the late 90's, she has always taken great pride in her classes, and spends hours each week reading articles and watching videos to keep abreast of the latest fitness research and trends.

In addition to her fitness qualifications, Kirsty has a Certificate IV in Training and Assessment and is trained to deliver five Les Mills programs, Pilates, Gymstick, aqua and ChiBall. She also has a passion for mentoring, getting huge satisfaction from watching students become fantastic instructors, and witnessing them discover a love for an industry which means so much to her.

Juggling her fitness world with a part time job working in architecture, Kirsty also strives to spend as much time as she can with her three children and lots of amazing friends. Unsurprisingly, she lives by the mantra 'Life is short, so never waste a single second!'



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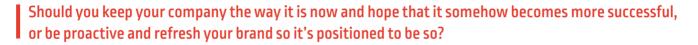
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# GIVE YOUR FITNESS BRAND A LOW-COST EACELIFI



#### **WORDS:** DEREK BARTON

o rebrand or not to rebrand? That is the question. Great brands are always evolving. They rebrand or reinvent themselves in a bid to stay current while making an emotional connection with their customers. You must refresh your brand and your company from time to time. You don't wear the same clothes decade after decade, right? You change things up, experimenting with different looks and styles

through the years, trying to stay current and remain relevant.

Great brands are incessantly perfecting their look, from their logo to their products, ads, website, and interior and exterior of their brick and mortar stores.

In my 30 plus years as a marketing professional, I have noticed many businesses, particularly health clubs, whose walls are sterile white – nothing beautiful, inspirational or classy on them. Yet, just like the rest of us, gym owners decorate their homes with beautiful and inspirational art, sculptures and plants. If 'branding' your home is important to you, so too should be branding your business.

#### Ad dollars and brand dollars

If you have a health club or a personal training or group exercise studio, you spend advertising dollars trying to inspire and motivate people to come into your gym. You should also spend some brand dollars to inspire and motivate people once they visit your gym. Done well, your branding may even be the catalyst that turns them from a visitor into a member. And once they become a member, your club has the potential to become their home away from home, so it had better look and feel as good to be there as it possibly can. If you fail to create a welcoming and inspiring environment, you reduce members' desire to spend time with you. And when that happens, the chances of them remaining a member with you evaporate.

#### Scary but necessary

Some companies, especially fitness facilities, never seem to evolve from the moment they first open their doors. Change may be scary, but it's necessary. I love a company that is constantly on the cutting edge and always finding better ways to inspire me. No matter the gym, restaurant or hotel that I go to, the most important thing for me is the experience. I want it to be so memorable that I can't wait to come back. I want the kind of place where I don't mind spending my time

# The 30-second article

- · You must refresh your brand and your company from time to time to stav relevant
- Fitness businesses spend advertising dollars to motivate people to visit, but they should also allocate some brand dollars to inspire people to stay once they have walked through the doors
- You need to create a welcoming and inspirational space that your members want - not just need - to spend time in
- Even low-cost changes like a fresh coat of paint, inspirational posters and murals will demonstrate to members that you care about their environment.

.....

or my money. I want to feel comfortable. It's all about the relationship to and experience with a product and service. Whether you're my gym, my group fitness instructor or my personal trainer, I don't want to outgrow you or get bored with you. Like any relationship, I want you to improve with age, as I hope I do. I want you to continue to inspire and motivate me.

#### What the big names do

Some of the most successful brick and mortar retail stores, like the Hard Rock Cafe. Nike Town, and the Apple Store, understand the power of branding and the importance of the customer experience.

The Westfield Corporation, which builds some of the best shopping malls in the world, understands how important the shopping experience is to its customer base. It spends a ton of money on design and branding throughout its malls. It continues to stay relevant by rejuvenating its malls throughout the years. It's worth it to them because it attracts customers, both new and existing. Brands pay big rent for locations in a Westfield mall because of the amount of foot traffic the brand attracts. Of course, it is then up to those retail tenants to inspire all that traffic to buy the product or service offered at that venue, or they won't last long. They too need to evolve, and must regularly rejuvenate their store fitouts. As I write this, Westfield is spending upwards of US\$800 million to renovate the mall near where I live in Century City, next to Beverly Hills. Locals can't wait to see it when it's completed next September, because it was





a good mall before, but from what we've seen so far, it will be exponentially better. Buzz is, it will be Westfield's best mall to date, anywhere. People love being a part of something spectacular, and so they will throng to this renovated mall with credit cards in hand for the kudos of shopping at the best mall in the world.

#### What you can do

Do you need to spend a ton of money to renovate or rebrand your brick and mortar business in order to make a difference to your customers? No. You can start with some low-cost changes like a few cans of new paint, and some inexpensive but inspirational posters and murals. Your customers will notice these changes and appreciate that you care about their environment. I help all my clients do this without breaking the bank.

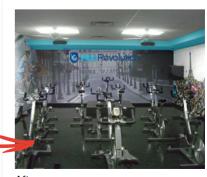
I once had a client in Montreal, Canada with a huge 100,000sq.ft. sports complex that had tennis and squash courts, a fullsized gym, restaurant, pro-shop and more. They hired me to help them after they heard me speak about branding at a fitness conference. As is usual, after my presentation a group of gym owners approached to ask me questions. That Montreal club owner showed me her business card and asked what I thought

of their logo. I said to her, 'To get an unbiased opinion, may I first ask your fellow gym owners here what they think?' She nervously smiled, shrugged her shoulders and nodded. I held up her card and asked, 'How many of you think the name of her club is 'West Island Club?' Half the people there raised their hands. I then asked, 'How many of you think the name is 'Club West Island?' The other half raised their hands. I already knew it was a confusing and badly designed logo, but I knew it would be more meaningful to her if her business peers said it before I did.

So, fast forward, I'm sitting in the Club West Island board room in Montreal and ask the owners and their staff what the members called their club. The overwhelming response is, 'The Club'. I reminded them how, after the public called Federal Express 'FedEx' for years, they listened to us and changed their name officially to FedEx. I then reminded my client that they were French Canadian, hence my suggestion to change their name to 'Le Club' reflecting their roots as well as what their members were already calling them. With great excitement, everyone agreed. The Chief Operating Officer leaned over to me with a smile and said, for the group to hear, 'We flew you 4,000 miles to tell us something we should have figured out ourselves?' I smiled







After

back and said, 'It's always the simple things that people overlook.'

I have often reminded my audiences and clients, if you don't think the little things matter, try sleeping with a mosquito. As the 'before' and 'after' pictures of Le Club in Canada and Penfield Sport & Fitness in New York illustrate, the little things all add up.

Anyone can be great once. It takes hard work to remain great year after year, decade after decade. Great companies understand that a business is never stable, they are either rising or falling, so the greats are never complacent. They're always striving to be better, re-inventing and re-branding themselves as they continue along the path of greatness. **N** 

Derek Barton is the President and CEO of Barton Productions, a marketing consulting company that helps its clients become more valuable and meaningful through improved branding, advertising and customer service. He has helped build several international brands, including Gold's Gym. bartonproductions.com



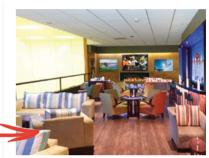




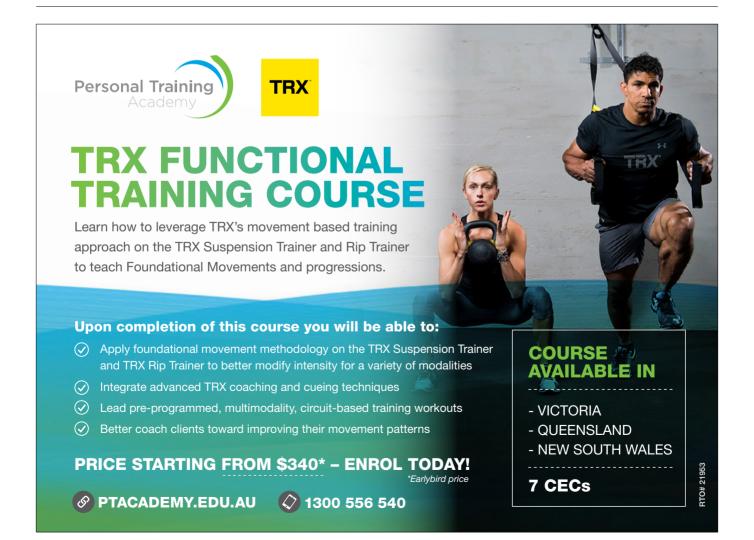
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After





# RESEARCH REVIEW:

# **WOMEN NEED IRON**

# (THE NON-DIETARY VARIETY!)

New research examines the potential impact of strength training on the development of type 2 diabetes and cardiovascular disease.

# WORDS: ASSOCIATE PROFESSOR MIKE CLIMSTEIN & JOE WALSH

Title: Strength Training and the Risk of Type 2 Diabetes and Cardiovascular Disease

**Authors:** Dr's Shiroma and colleagues. (National Institutes of Health, National Institute on Aging, Maryland, USA)

Source: Medicine & Science in Sports & Exercise. 49(1): 40-46 (2017).

Introduction: One thing that I like about seeing patients with a wide variety of chronic diseases or disorders is that it never gets boring. You may see 1,000 individuals with (for example) osteoporosis each year, yet every one of them is different. Students always ask 'do you memorise the exercise guidelines for each of the disorders or do you have them stored somewhere?' This is quite a reasonable question, and the answer is yes and yes. You can't help but commit the guidelines to memory, but as they are 'living guidelines' they are continually updated, and it's no small task to keep abreast of them. So, despite my brilliant memory... I still keep an electronic copy of the most recent exercise prescription guidelines in my DropBox for easy access, each in a folder specific to the disease/disorder. Hell of a good system (in my humble opinion).

Another common question from students is 'do you prescribe the same exercise prescription for every patient with the same disease?' This time the answer is yes – and no. The guidelines provide the base of the exercise prescription, however for best practice I need to take into account any limitations each patient may have. For example, the majority of patients I see with osteoporosis are generally older (50 years and over) and female. But regardless of gender, an osteoporosis patient's exercise prescription will focus upon weight bearing exercises, falls prevention exercise/training and enquiry into their vitamin D and calcium intake (the latter to ensure they are meeting the International Osteoporosis Foundation guidelines). Yes, I do this for every patient. When dealing with the mature-aged patient, you also have to appreciate the presence of co-morbidities (the presence of additional diseases or disorders).

But what 'protection' is afforded from resistance training for other co-morbidities, such as cardiovascular disease and type 2 diabetes mellitus? This is the question Dr Shiroma and his colleagues investigated using data from the Women's Health Study, a large-scale study from Harvard Medical School which used annual questionnaires to investigate women's health in more than 35,000 women annually from 1992 to 2004 and then afterwards in an ongoing observational study. The purpose of the study was to advance the knowledge

about prevention of cardiovascular disease, cancer and other diseases in women. For this study, the researchers were interested in the association between strength training and the incidence of type 2 diabetes and cardiovascular disease risk.

Methods: Dr Shiroma and his colleagues assessed the health of approximately 36,000 healthy women (average age 62) who completed an initial questionnaire in 2000 and then one per year until the final questionnaire in 2014. For this particular study, they were interested to see how many active women developed type 2 diabetes and/or cardiovascular disease. They defined cardiovascular disease as cases of either myocardial infarction, stroke, having undergone coronary artery bypass surgery, angioplasty or death (attributed to

# <del>60</del>

#### The 30-second article

- A large scale longitudinal study investigated the association between strength training and the incidence of type 2 diabetes and cardiovascular disease risk in women
- The effect on incidence of diabetes and cardiovascular disease of strength training, aerobic exercise and a combination of the two was gauged
- Both strength training and aerobic exercise were found to independently have very significant positive health associations
- A combination of strength and aerobic work was associated with the most positive health outcomes.





cardiovascular disease). The researchers investigated the physical activity of these women, enquiring into their walking pace, flights of stairs climbed daily, leisure activities (walking, hiking, jogging, cycling, aerobics, swimming and weight lifting/strength training). Leisure activities were quantified by time per week. For analysis purposes, the researchers categorised the leisure activity into: no participation; 1 to < 20mins/week; 20 to < 60mins/week; 60 to < 120mins/week; and  $\ge 120mins/week$ .

**Results:** A total of 35,754 healthy women (average age 62, average BMI 27kg/m²) volunteered to participate in this study of which almost 7,000 (18.9%) participated in strength training. Women who reported participation in strength training tended to have a lower BMI, healthier eating patterns and be less likely to smoke.

Over the 14-year period (2000 to 2014), 2,120 of the women developed type 2 diabetes and 1,742 developed cardiovascular disease. However, the women who participated in any strength training had a 30 per cent reduction in developing type 2 diabetes and a 17 per cent reduction in developing cardiovascular disease (compared to women who completed no strength training).

Women who participated in both strength training and  $\geq 120$  minutes of aerobic exercise demonstrated a 65 per cent risk reduction for type 2 diabetes; if they only participated in aerobic exercise the risk reduction was 48 per cent.

If the women participated in both strength training and  $\geq 120$  minutes of aerobic exercise they had a 39 per cent reduction in developing cardiovascular disease. If they only participated in the aerobic exercise, this resulted in a 21 per cent reduction of risk.

Conclusions: This was the first longitudinal study to examine the association of strength training and development of type 2 diabetes and cardiovascular disease. Women who participated in higher amounts of both strength training and aerobic exercise had a greater reduction in type 2 diabetes than those who only strength trained or completed aerobic exercise. These findings provide evidence that the benefits of strength training and aerobic training are independent.

**Pros:** This is a great study which demonstrates the benefits of strength training in reducing the risk of developing type 2 diabetes or cardiovascular disease in women. These findings also illustrate the further effectiveness of combined strength and aerobic exercise. The Women's Health Study is a great health initiative of the Harvard Medical School, the researchers should be congratulated for their research efforts.

**Cons:** The questionnaire was quite limited with regard to the information it collected on strength training, as the researchers only enquired into the 'time'. It would be quite advantageous if they could establish the dose (sets x reps x intensity) to determine where threshold(s) may exist with regard to reduced risk. Perhaps this will be one of their follow-up studies.  $\bf N$ 

Associate Professor Mike Climstein, PhD FASMF FACSM FAAESS is one of Australia's leading Accredited Exercise Physiologists and researchers. He is director of chronic disease rehabilitation at Vale Medical Practice.

mike.climstein@sydney.edu.au

**Joe Walsh, MSc** is a sport and exercise scientist. As well as working for Charles Darwin and Bond Universities, he is a director of Fitness Clinic in Five Dock, Sydney. **fitnessclinic.com.au** 

#### MORE?

Check out 'Why she should lift: strength training your female clients' by Susy Natal on page 12.



# BECAUSE SOMETIMES SIMPLE IS BETTER



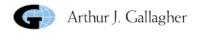
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# YOUR GENES LOAD THE GUN BUT YOUR LIFESTYLE PULLS THE TRIGGER

Advances in easily accessible genetic testing could affect the way your clients train – and live their lives.

### **WORDS: PETA CARIGE**

enetics, epigenetics, nutrigenomics, copy numbers, single nucleotide polymorphisms or SNPs (pronounced 'snips')... are these the latest buzz words in the nutrition world? Or are we about to enter the start of what will become a truly individualised health service?

Hopefully it is the latter, as genetics currently lies safely in the hands of health professionals and is yet to be picked up by café owners. We always knew genetic testing was a possibility, but finally it has become less invasive for patients and cheap enough to be accessible by the masses. In addition to genetic testing being affordable, it has also accumulated the evidence to support nutrition and lifestyle interventions around specific genes.

This last point is a very important one, as there are literally thousands of genes that we can now test for. As a sports dietitian, however, I have aligned myself with a company that ethically has decided to do the following:

- a) Only test genes that can be altered by diet and or lifestyle
- b) Only test genes whose diet and lifestyle interventions are supported by evidence.

#### No information without action

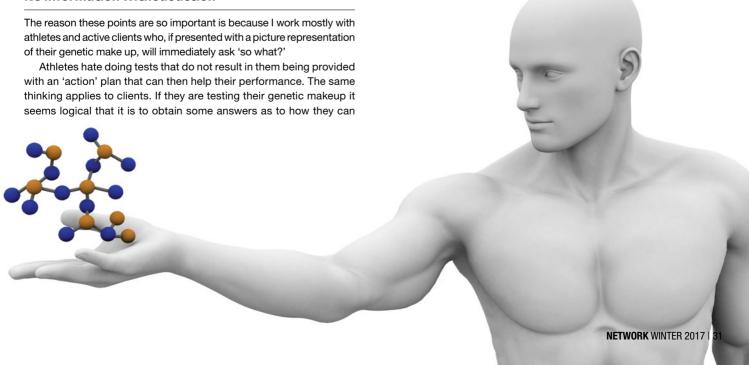
make changes to help them achieve their personal goals. Or in the case of the gene I'm specifically discussing, to get results faster and figure out the type and timing of foods that are best for your body.

## You're with Amy. Lucky?

So let's get technical. One of the simplest tests on the market currently is the genetic testing for Amy-1 CN, or the Amylase – 1 gene, copy number variation. This specific gene (Amy-1) can have many different copy numbers (CN), from one to 20 to be exact. A copy number variation is when the gene is literally multiplied, i.e. CN 2 means that the gene is multiplied twice. The number of copy numbers has been found to correlate with a person's ability to produce Amylase in the whole body (mostly found in saliva but also found in a large number of organs throughout the body).

Put simply, we can test for a variation in a specific gene that is linearly correlated with the amount of Amylase the body produces.

So what does this mean in terms of physiology, activity and lifestyle?



We know that Amylase production is strongly correlated with our body's ability to metabolise the starch component of carbohydrate foods. Therefore, the health benefits of knowing this gene variation begin to unfold. The statistics are pretty remarkable, with low copy numbers (i.e. low Amylase) associated with:

- an 800 per cent increased risk of being overweight
- significantly increased risk of type 2 diabetes
- poorer glycaemic control
- a lower lactate threshold
- · increased sensitivity to gluten.

The last point, once again, is an important one. The rise of gluten free and people's gluten intolerances could actually be a genuine cry for help by clients who know something is just not right within their bodies. However, in this case, changing from flour to rice or corn products will not help them, as it isn't gluten that they aren't tolerating, it is starch. Gluten free products are just as high in starch as glutencontaining products. Thus the introduction of genetic testing and individualised nutrition plans allows us to recommend specific foods, fruits and vegetables for a client, in combination with specific training programs that will help them get results.

## Working with, not against, our genes

The great thing about genetics is that you cannot change them, but you can decide to work with them or against them. Once you present a patient with the facts about what



#### The 30-second article

- Genetic testing has become less invasive and cheap enough to be accessible by the masses
- It has accumulated the evidence to support nutrition and lifestyle interventions around specific genes
- One of the simplest, and most useful, available tests is for Amy-1 CN, or Amylase – 1, which is strongly correlated with the body's ability to metabolise the starch component of carbohydrate foods
- Once a test has scientifically shown what works best, in terms of nutrition and exercise, for a specific genetic profile, clients can feel a far greater sense of buy-in and faith in the prescription.

......

## "

# Once you present a patient with the facts about what works best for their genetic profile, it is really hard for them to justify the latest 'fad' over sound, evidence-based advice



works best for their genetic profile, it is really hard for them to justify the latest 'fad' over sound, evidence-based advice. The biggest advantage of being able to test a client's Amy1-CN is the buy-in and compliance that the client then demonstrates once they have the knowledge at hand and understand why they have struggled to lose weight in the past, or why they feel 'off' after pasta.

Results can be achieved nutritionally by literally changing the type of fruit your client is eating and only allowing starch carbohydrate intake at certain times of the day (not even cutting it out). This is a great aspect of working with genetics: as health professionals it allows us to be extremely prescriptive, which clients really enjoy if they have had limited success previously.

# Realising the true potential of genetic testing

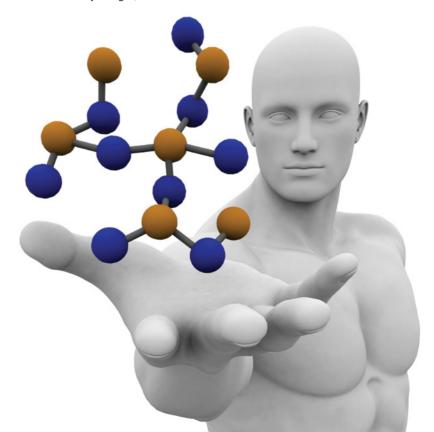
The potential for buy-in and results with this new found knowledge is vast. However, my experience to date with the use of genetic testing in clinic has shown that it currently only attracts patients that are already 'healthy informed', i.e. that already eat well and are of a healthy weight, but want to

validate that they are doing the correct thing for their bodies. Rarely does it attract the type of client it could benefit most – those with metabolic diseases that have given up on ever achieving a healthy weight.

The potential is huge for application of this gene to help those insulin resistant clients in the gym with some very small nutritional changes and specific training to suit their genetic make up. However, as a network we need to make sure that we are using genetic testing as an extra tool to help us unlock an already complex puzzle

Thankfully, people appear to be taking the latest advances in genetics seriously, and it is putting a whole new spin on 'you can't outrun your diet... you can't outrun your genes'. We now know that all of our guns are literally loaded, however, our lifestyle is responsible for pulling the trigger. **N** 

Peta Carige is an Accredited Sports Dietitian who has worked for the past 12 years with elite teams including Brisbane Broncos, Newcastle Knights and the Newcastle Jets. She currently consults to Australian Rugby Sevens, NSW Waratahs, NSW Rugby League and Manly Sea Eagles. Peta also undertakes clinical and presenting work. petacarige.com.au





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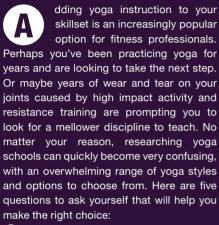


# YOGA FOCUS:

# **HOW TO BECOME A YOGA TEACHER**

You're thinking about adding yoga to your teaching repertoire — but with so many styles and courses to choose from, where do you start?





- 1) Where do you want to teach? Yoga studio, or fitness facility? Most yoga studios will only hire with a minimum of 200 hours (often more) of training, and if they have their own teachertraining program they will generally prefer to hire their own graduates. On the other hand, fitness facilities will usually accept a general foundation training, such as YogaFit's 6-day Fundamentals course.
- 2 Is the school accredited? If you are a current GFI or PT, accreditation with Fitness Australia will be a bonus, so you can also earn your required CEC's. If

you'd like the opportunity to teach overseas, Yoga Alliance is the most recognised certifying body internationally. Schools aligned with Yoga Alliance will have an RYS designation. Yoga Alliance Australia and Yoga Australia are your main certifying bodies for Australia. By taking your course through an accredited school, you can be confident that your school of choice has been audited to ensure a high level of education, as well as a wide range of topics important in yoga, such as anatomy, history, philosophy and practice teaching.

- What is your learning style? Do you prefer to lock yourself away and devote 100 per cent effort to the task at hand, or do you prefer to take in a little bit at a time, giving yourself a chance to practice and understand before moving forward? Trainings are generally offered in one of three ways: full intensive (usually three weeks straight); a commitment to specific weekends within a 6-month period; or module-based, whereby you choose your time frame and pay as you go.
- What's your budget? An average 200hour certification course will cost

approximately \$3,100-5,600 depending on the school you choose. On top of this, you may need to pay for accommodation, food and travel, so you'll need to consider whether travelling is an option for you. Some schools will request full payment up front and others will have payment plans.

5 What do your friends say? Nothing tops first-hand experience. Ask around and see what experiences friends and colleagues can share about trainings they have taken. Attend workshop sessions at FILEX and try to take classes with different teachers in your city to get a sense of the style of yoga that most resonates with you.

No matter the route you choose, your yoga journey is just that – a journey that provides the opportunity for self-reflection, inspiration and a little sweat along the way. In yoga we use the greeting word 'Namasté' which means 'the light that dwells in me, honours that same light that dwells in you'. May your journey be all that it needs to be. **N** 

Lisa Greenbaum holds her E-RYT 500 in yoga and is the Program Development Manager for YogaFit Australia and Director of YogaFit Canada.

# YogaFit Instructor Training near you this Winter



A range of YogaFit Instructor Training workshops are being held across Australia this Winter.

- YogaFit Fundamentals: 16-18 & 23-25 June, Perth; 21-23 & 28-30 July, Sydney; 18-20 & 25-27 August, Canberra; 8-10 & 15-17 September, Melbourne
- YogaFit Anatomy & Alignment 2: 20 & 21 June, Perth; 22 & 23 July, Melbourne; 9 & 10 September, Brisbane; 23 & 24 September, Sydney
- YogaFit Level 3: 28 & 29 July, Perth; 20 & 21 July, Melbourne; 7 & 8 September, Brisbane;
   21 & 22 September, Sydney
- YogaFit Meditation & Mindfulness: 30 July, Perth; 6 August, Sydney; 24 September, Melbourne
- YogaFit Kids!: 3 August, Sydney
- · YogaFit Older Adults: 4 August, Sydney; 22 September, Melbourne
- YogaFit Prenatal: 5 August, Sydney; 23 September, Melbourne

Find out all you need to know at yogafitaustralia.com





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# Riding high on a wave of positive energy!



Writing this column for this edition of *Network* magazine is one of my easiest tasks of the year. The reason for that is FILEX 2017 was just a few days ago, and, as I type this, we are literally in the process of unpacking the weekend and dissecting what was, without a doubt, our best event yet. The whole Network team is running on the smell of an oily rag after an extraordinary effort over four long days, but also riding high on a wave of the positive energy of thousands of fitness professionals.

It would be hard to recap in a few words the experience of the FILEX event, so instead I'll use this space to express my thanks.

First, to our amazing presenters who brought their global expertise and their A-Game to hundreds of sessions over the weekend. We hosted some of the highest calibre presenters we've ever had, and they delivered in spades. A lot of work goes in to preparing even a short presentation, and for your efforts I thank you.

Second, to our unbelievable Event Crew of volunteers who worked their rear ends off to ensure that all sessions had the equipment and A/V they needed. We simply couldn't put FILEX on without you, and for that I say thank you.

Third, to our extraordinary Network team who worked tirelessly for four very long days – not to mention long weeks in the lead up – to deliver a seamless onsite experience for everyone involved. I'm humbled to be a part of this team, and can't imagine a better bunch to work with. Thank you, thank you, thank you.

And, finally, to Nigel and Lisa Champion, and Greg Hurst. Your tireless work over the past 30 years has literally made the Australian fitness community what it is today. We celebrated this enormous legacy at FILEX (see page 10), and you deserve every accolade you receive.

FILEX is always an excellent reminder to me of just how fortunate I am, indeed we all are, to work in this amazing industry. Every handshake, smile, hug and kiss we shared onsite was full of optimism and energy, something that I believe is almost unique to the fitness industry and our community.

I look forward to repeating the experience with you all next year, from 20-22 April at ICC Sydney.







Regards,



Ryan Hogan, CEO ceo@fitnessnetwork.com.au



# The world's first rep-counting headphones

When you're taking some time for your own workout between training clients, it can be good to get into the zone. The Jabra Sport Coach Special Edition headphones, with superior sound quality and a perfect fit, enables you to block out workout distractions and focus on your performance.



Jabra Sport Coach Special Edition offers a built-in TrackFit motion sensor that automatically counts your reps and tracks your every move. Set up your workout in the Jabra Sport Life app and let the in-ear coach count your reps, guide you through the circuit and track your performance, all while listening to your music (or The Fitness Industry Podcast!) Combine cross training with running and the integrated motion sensor will also measure distance, pace, steps, cadence and calories burnt.

For your chance to win a pair of these awesome headphones (RRP \$224.99) email editor@fitnessnetwork.com.au and tell us in 50 words or less how a Jabra Sport Coach Special Edition would help maximise your motivation. You can even show us on Instagram by tagging #Jabra if you win! jabra.com.au

# Workout gear just innovated

Australian performance innovation company 776BC has launched the next generation of performance clothing, MOTION. Company founders Cameron McKenzie-McHarg (two-time Olympian and Beijing silver medalist) and Kate McKenzie-McHarg worked with the



Victorian Institute of Sport to map the contours and lines of the body, and created a series of key lines and markers that have been incorporated into the design of each piece. So, if you're not nailing your downward dog, or unsure of the shape of your lunge, 776BC MOTION allows anybody, from elite athlete to casual gym goer, to self-assess. And the clothes look amazing.

Alongside the new range, 776BC is launching the 776BC MOTION Companion app, which informs users which markers on the garment to focus on for correct technique.

For your chance to win one of two sets of tank and tight combos (one men's and one women's) email editor@fitnessnetwork.com.au and tell us in 50 words or less why your training wardrobe needs to innovate. **776bc.com.au** 

# Wave goodbye to gym hair!



Say hello to your new gym bag essential. Designed by the hair experts at Dessata, the new Dessata MAXI is the ultimate detangling tool promising to penetrate hair deeper and faster than any other brush. Sporting 347 triple length bristles that are 30% longer than

its competitors, the ergonomically designed brush effortlessly tackles those hard-to-reach knots while adding a natural shine and softness to hair. Ideal for thick, curly and unmanageable hair types, the Dessata MAXI is suitable for those on the go, like you, and works seamlessly on wet and dry hair.

For your chance to win 1 of 4 Dessata MAXI brushes, email editor@fitnessnetwork.com.au explaining in 50 words or less why it's time to tame your tangled tresses! **dessata.com.au** 

# **NETWORK COMMUNITY**





Namaste! It's all about the yoga this season, so check out the huge range of courses all over the country. For details see **fitnessnetwork.com.au/calendar** 



#### YogaFit Fundamentals

16-18 & 23-25 June Perth 21-23 & 28-30 July Sydney 18-20 & 25-27 August Canberra 8-10 & 15-17 September Melbourne



### YogaFit Anatomy & Alignment 2

20 & 21 June Perth 22 & 23 July Melbourne 9 & 10 September Brisbane 23 & 24 September Sydney



#### YogaFit Level 3

28 & 29 July Perth 20 & 21 July Melbourne 7 & 8 September Brisbane 21 & 22 September Sydney



# YogaFit Meditation & Mindfulness

30 July Perth 6 August Sydney 24 September Melbourne



YogaFit Kids

3 August Sydney



### YogaFit Older Adults

4 August Sydney
22 September Melbourne



# YogaFit Prenatal

5 August Sydney23 September Melbourne





# **THE SOCIAL NETWORK**

What grabbed your attention on Network's social media?





#### Chef gives health advice

When we shared an article about celebrity chef Pete Evans suggesting in a Channel Seven interview that people do their own health research rather than trust peer-reviewed scientific studies, opinion was divided, to say the least...



Daniel: Confirmation bias is a very powerful thing, coupled with the fact that Google will deliver personalised responses to you based on your browsing history. Combine those things and all we get is people digging themselves into ways of thinking. For your own personal and professional development, challenge yourself to go out and read a study that CONFLICTS with YOUR beliefs and try as best you can to go in open-minded.



Lauren: Pete Evans clearly does not know what he is talking about, nor the reasoning behind the position he has taken.



Trish: Sure, if you like to continue popping pills and using synthetic crap that pharmaceuticals want you to believe so that they can make you more sick, go right ahead, but if there are individuals who have seen healthy permanent lifestyle changes in their bodies, then good on them!





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Share your fitness pics! instagram #ozfitnetwork or email your snaps to editor@fitnessnetwork.com.au

# **NEW MEAL PLANNER** FOR CLIENTS IN YOUR **MEMBER GYMBAG**



Good nutrition a major factor in achieving fitness and wellbeing goals - but for many clients getting creative and healthy the kitchen can just seem too hard. It needn't

be. By planning and preparing meals when they have time on their hands, they'll save themselves hassle when they're busy and tired, making it easier to stick to their healthy eating intentions. To help your clients establish this habit, download and print off Network's Weekly Meal Planner from fitnessnetwork.com.au/gymbag

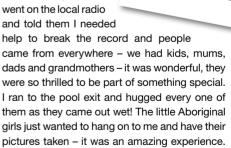
# **CONGRATULATIONS AND BON VOYAGE KERRI!**

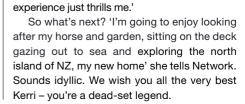
Network sends a huge congratulations to long-time Network supporter and all round aquatic fitness superstar, Kerri Parkinson, who recently married the lucky Miro Cooper!

Blessed with a window of sun on an otherwise wet Autumn weekend, the happy couple exchanged their vows in front of friends and family, before taking their first steps as husband and wife through a characteristically fun Guard of Honour made up of agua noodles!

After many years involvement with Network, Kerri recently co-ordinated the agua strand at FILEX for the last time, as she is packing up her swimming cossies, farewelling Sydney and moving across the ditch with Miro.

Network asked Kerri about her past three decades working in aquatic fitness; 'Memories, oh gee, so many... Receiving a Lifetime Achievement Award in 2010 is right up there, and so is breaking a record for the most aqua participants in a 25 metre pool that was done at Broken Hill YMCA on Australia Day 2016. I went on the local radio and told them I needed





Seeing people discover the wonders of working

out in water and how much they enjoy the



# MEMBER PROFILE:

# ROSEMARY DUGAN PT BUSINESS OWNER, WA





#### What fitness qualifications do you hold?

Cert III and Cert IV; Diploma of Fitness; Group Fitness Instructor (Aqua, Les Mills, Rip 60), Heart Moves Leader, Lecturer & Trainer in Health & Fitness & Sport (Dip. Of VET); Master Practitioner NLP; Reiki Master.

Where do you live and work? In Perth, WA.

# What is your main role in the fitness industry?

Delivering group fitness and PT sessions, as well as training and educating fitness professionals and the general public at HBF Arena Joondalup, and through my business Synchronised Body Solutions.

# How did you arrive at where you are today in your career?

After dancing professionally for 10 years this was a natural career transition because of its physical aspect. I'm fortunate to have met people that encouraged me to get out of my comfort zone and take my skills and education further than I ever imagined. After 14 years as a curriculum developer, lecturer, presenter and assessor I decided it was time to start my own business and follow my passion of fitness and wellbeing.

# What does your typical day look like?

Up by 6am and then meditate for 15 minutes

before checking emails over a coffee. Then I do some study for a personal development course. If I have no classes, PT sessions or workshops that day, I will have client appointments for Reiki and NLP. I will then work on material for upcoming training workshops or network and attend business meetings. In the late afternoon I do my own workout, before heading home for dinner and quality time with my family.

#### What skills are needed in your role?

I am currently learning a lot about running a business, marketing and the technology involved. It's a huge learning curve, challenging but exciting. To succeed, you need to be driven, passionate, committed, organised and creative. Great leadership and communication skills are also a must, along with confidence, self-belief and perseverance.

# What are the best and worst aspects of your job?

I'm definitely a people person, so I love the interaction with clients. I love the team work, camaraderie and continual learning I get from my peers. I'm also enjoying broadening my clientele market, continually expanding my personal education and development. Being able to choose who I want to work with, and when, is gratifying. I've been fortunate to experience only the highs – if I encounter any lows, I'll treat them as learning experiences and move on.

# What has been your greatest career challenge to date?

Trying to re-educate people with credible and logical information about their health and fitness. With so many myths and mixed information out there, people are susceptible to believing misleading ads, marketing and social media from unqualified charlatans.

# And your greatest highlight?

Educating and assisting students to find

their feet and succeed in the fitness industry. Watching instant positive change in my NLP clients is also incredibly rewarding.

# What's your main focus now and what are your goals for the future?

My main focus is to keep growing my business, as well as my industry profile. I will keep training and educating industry professionals, as well as expand the services I offer through my business.

# Who has inspired you in your fitness industry career?

I draw inspiration from countless people I've encountered throughout my career, who have battled against the odds to succeed. People who are genuine about helping improve the quality of life for others and who do it with true passion and commitment inspire me.

# What motto or words of wisdom sum up your fitness/life philosophy?

There are two that I live by: 'Strive for progress, not perfection' and 'SUCCESS all depends on the second letter.'

# And finally, who would be on your ultimate dinner party guest list?

Anthony Robbins (genius), the Dalai Lama (for his spiritual wisdom), Jane Fonda (the conversations we would have...), Whoopi Goldberg (for a good laugh), Dr Phil (to pick his brains), Jennifer Lopez and Dwayne 'The Rock' Johnston (because I'm a big fan!)

Want to be profiled in a future issue?

For details email editor@fitnessnetwork.com.au



# (AND WHY YOUR CLIENTS SHOULD LOVE THEM)

The often forgotten 'powerhouse' of the cell, the more mitochondria we have, the lower our risk for developing many chronic diseases. So how can we get more of them?

# **WORDS: TONY BOUTAGY PhD**

he vast majority of focus in the fitness industry is on skeletal muscle and its ability to contract, with the emphasis on how to make it bigger, stronger and more functional.

The often forgotten aspect of muscle is the *mitochondria*. Often called the 'powerhouse' of the cell, for its ability to oxidise fuel sources to create energy, mitochondria are critical for health and the evolution of the human species. The more mitochondria we have, the lower our risk for developing many chronic diseases. The average individual may have literally billions of mitochondria in their skeletal muscles, and the trained individual even more. It has been estimated to comprise around 10 per cent of an individual's body mass.

Given the strong relationship between mitochondria and healthy ageing, it makes sense to further our understanding of the microscopic world of this ancient 'bacteria' by exploring how the body grows them, the contribution of exercise to their development and function, and the role nutrition plays in keeping them healthy.

# Mitochondria – five decades ago

50 years ago, pioneering research by John Holloszy showed, for the first time, that endurance training could cause an increase in the number of mitochondria found in the muscle of rats. Holloszy discovered increased oxygen and energy utilisation in rats that were exercised on a treadmill compared to their sedentary peers, and it was this finding that explained their improved endurance fitness.

Since 1967, our understanding of mitochondrial regulation in muscle has progressed rather slowly until modern times, when

advancements in molecular biology have allowed researchers to use state-of-the-art techniques to measure the cellular triggers causing the growth and expansion of new mitochondria, termed mitochondrial biogenesis.

It is now understood that our mitochondria is regulated by a complex interaction between several 'energy sensors' in the muscle and 'coactivators' which cause the proteins to become transcribed and formed into mitochondria. The primary energy sensor in the muscle is a kinase called AMPK. Muscle contraction (both intensity and duration), as well as the 'energy status' of the muscle (i.e. depleted levels of glycogen) cause the activation of AMPK. This, in turn, upregulates the co-activator PGC-1 $\alpha$  to start the process of mitochondrial biogenesis.

There has been incredible interest in recent years in exploring the AMPK/ PGC-1 $\alpha$  pathway in mitochondrial biogenesis, as mitochondrial dysfunction is now regarded as an important component of different diseases associated with ageing, such as type 2 diabetes and Alzheimer's disease. It has also been shown that AMPK activity decreases with age and sedentary lifestyles, which may contribute to decreased mitochondrial biogenesis and function with ageing and disuse.

# **Exercise and mitochondria**

Muscle contraction during exercise increases the activity of AMPK (which detects falling energy availability in the muscle), which, in turn, increases the expression of PGC-1 $\alpha$  and signals the growth and proliferation of mitochondria.





### The 30-second article

- Often called the 'powerhouse' of the cell, for its ability to oxidise fuel sources to create energy, mitochondria are critical for health and the evolution of the human species
- Physical activity causes an increase in the number of mitochondria
- A complex interaction between several 'energy sensors' in the muscle and 'co-activators' cause proteins to become transcribed and form into mitochondria
- Nutrition and nutrient-timing, specifically training after fasting or following a low-carbohydrate meal, can favourably affect mitochondrial adaptation.

Aerobic exercise that emphasises volume (continuous aerobic endurance training) or intensity (such as high intensity interval training - HIIT) is generally regarded as the most potent controller of the growth and function of mitochondria. Research indicates that volume plays the greatest role in the growth and size of mitochondria, and intensity appears to regulate their function. It is difficult, therefore, to definitively say whether HIIT or continuous exercise are 'better' for mitochondria as they both facilitate different effects, but a very recent study has shown that when matched for total volume, HIIT appears to have the edge. Resistance training, at this time, has a lesserknown role in the regulation of mitochondria.

# **Nutrition and mitochondria**

Research has begun to explore the potential role of nutrition, supplements and the timing of food intake on mitophagy and the regulation of mitochondria. Time-restricted feeding, periodic fasting and fasting-mimicking diets are all promising interventions. Both timerestricted feeding and fasting-mimicking diets increase the activity of AMPK and thus promote the transcription of PGC-1a and subsequent mitochondrial biogenesis. Time-restricted feeding works on a simple premise that humans have evolved an exquisite relationship between the timing of food availability and its consumption, with periods of fasting, which correspond with sleeping time. The invention of 'artificial' light has enabled both activity and food consumption to occur when, for all of previous human evolution, we would have been asleep. Advancements in our understanding of circadian physiology have demonstrated several metabolic markers of health, including increased activity of AMPK and mitochondrial growth, when there is a daily fasting period of 12 to 14 hours.

#### Food components and mitochondria

Several food compounds have been shown to augment the effect of exercise on mitochondrial biogenesis in animal studies. The most promising to date are green tea extracts, sodium bicarbonate, caffeine, cocoa, resveratrol, quercetin, and certain amino acids. The vast majority of human data, however, at this early stage of investigation, has failed to find the same benefits seen in rodents. Research is currently underway to discover why this is the case.

#### Supplements and mitochondria

Debilitating genetic diseases that cause mitochondrial dysfunction and concurrent muscle wasting can afflict both children and adults. Due to the inability to contract skeletal muscle in these patients, there has been research interest in 'supplement cocktails' that have the potential to 'mimic exercise' and create mitochondrial biogenesis. Animal experimental models have demonstrated the potential role of certain supplements in the support of healthy mitochondria (Creatine, I-Carnitine, α-lipoic acid, Coenzyme Q<sub>10</sub>, reduced nicotinamide adenine dinucleotide (NADH)). Supplements containing nicotinamide riboside appear to have the greatest likelihood of positively affecting mitochondria. Only short-term data currently exists for the efficacy of these nutrients and long-term robust human experimentation is still needed.

# Nutrient timing and mitochondrial biogenesis

Recent research has shown that performing exercise or recovering from exercise without the provision of carbohydrate has a favourable effect on mitochondrial adaptation. This can be done by performing sessions without a carbohydrate-rich meal before, or performing glycogen depleting exercise (e.g. HIIT) and then recovering with little emphasis on carb-rich foods and training again, depleted, or sleeping 'low' and training first thing before breakfast while withholding carbohydrate. AMPK activity and mitochondrial adaptation is significantly increased when exercise is performed in a glycogen-depleted state, when compared with muscle contracted in a state of high muscle glycogen.

# Tony's favourite mitochondrial boosting workouts

Interval training broadly falls under two distinct methods: 1) power or sprint interval training (SIT); or 2) VO<sub>2</sub>max intervals or high intensity interval training (HIIT).

HIIT can be further divided into steady state intervals or short work-to-rest ratio intervals performed in series.

### **SIT workouts**

- 4-6 x 30 seconds 'all out' with 4.5 minutes rest
- 4-6 x 20 seconds 'all out' with 2 minutes rest
- 4-6 x 60 seconds 'best hardest pace' with 4 minutes rest

#### **HIIT workouts**

- 6 x 4 minutes with 1 minute rest
- 6 x 3 minutes with 2 minutes rest
- (20s with 40s rest x 9, rest 60 seconds) x 3
- (30s with 30s rest x 9, rest 60 seconds) x 3
- (40s with 20s rest x 8, rest 2 minutes) x 3

The key to mitochondrial adaptation is stress and variety. In practice, you would ensure that over the weeks you would perform several different styles of sprint interval training (SIT) or HIIT, sometimes with low muscle glycogen and sometimes with high, which would then be followed by lower carbohydrate eating, sleeping 'low' and training before breakfast to ramp up AMPK.

These methods, along with regular resistance training and, perhaps, time-restricted feeding will look after our mitochondria and they, in turn, will look after us as we age. **N** 

Tony Boutagy, PhD, AES, AEP is a Sydney-based fitness professional who has been involved in training the public, coaching athletes and educating personal trainers for over two decades. He is an Accredited Exercise Physiologist, holds a PhD in Exercise Science and runs the Boutagy Fitness Institute in Sydney, a strength gym and education centre for personal trainers. tonyboutagy.com



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By establishing and following a clear class cover process, you can minimise the problems that come with instructor cancellations and last-minute no-shows.

# WORDS: LEISL KLAEBE

f you teach group exercise, or manage those who do, the question of what happens when the regular instructor can't show up to class will be a familiar one. Without an established process in place to address such eventualities, it can also prove to be a continual headache.

Let's look at the 101's of group ex cover procedures – as well as some basic team manners in relation to covering classes.

# The GFM's role

If you're the GFM, you want your timetable to run like a well-oiled machine. This doesn't mean that you should be frantically running around behind the scenes to sort out everyone's problems: rather, you should be empowering your team to take responsibility for themselves.

#### Build a culture of ownership

As the GFM, you need to ensure that everyone on your instructor team knows

that if their name is on a class, they are responsible for teaching or covering that class – not you, not anybody else. Reiterate this regularly and make sure all new team members are aware of this.

Build a culture among your team in which their class is gold. Discourage covers and encourage instructors to own their class and their timeslot and be consistent with it. They are not just the instructor that happens to deliver that class: it is *their* class. Members will come back to a class regularly when they feel the instructor cares enough to turn up for them every week. Occasionally though, whether due to planned holidays or unforeseen circumstances, even the most diligent instructors will require cover.

# Let Facebook do the hard yards

Set up a closed Instructor Facebook group for your club's instructors and relevant staff. Create a protocol whereby this is the primary method for finding covers. All team members should be a part of this group and check it regularly.

When a member of your team posts in the Instructor Facebook group requesting a cover, ask them to tag people who are qualified to teach that program or who have covered the class in the past.

#### Provide a contact list

Provide an instructor contact list with teaching qualifications, phone numbers and email contacts. Email this to your team and pin it to the Instructor Facebook group so it's readily available. Keep this updated so all information is current and new members of your team are included.

#### Follow a process

By establishing a process, and making it known to all team members, you will reduce the problems and confusion that come with instructor cancellations and last-minute noshows. The following steps form the basis of a very effective cover process.

- 1. All covers must be confirmed in advance with the GFM in writing.
- 2. The instructor that is getting their class covered must also confirm with their

cover instructor in writing, making sure they note the class, the time, the date and any other pertinent information (e.g. if the cover instructor doesn't usually teach at that club, let them know where the mic and batteries are, who to speak to if there are any problems on the day, where to write class numbers and so on)

- Use a covers book, spreadsheet or other system to update your weekly timetable, and issue it to your team weekly in advance, noting all covers in a different colour.
- Remind your team to check their regular classes and their covers, and reiterate that if their name is on a class they are responsible for teaching or covering that class.
- 5. Update your online class timetable, in-club screens or class timetable board, so members know who is teaching classes that week. Keeping this updated also acts as an additional reminder for your instructor team.

#### **Instructor Manners 101**

As with anything in life, some simple good manners will go a long way when it comes to organising class covers.

#### Timing is everything

If you pencil someone in to cover for you because you think you may need a cover but aren't completely certain (e.g. doctors appointment may run late but you *should* be there in time), ensure you give the cover instructor a time by which you will confirm, e.g. pencil them in to cover tomorrow's 9.30am class, but confirm with them by 8.30am. This gives your colleague adequate time to get organised or change their plans if you don't need them to cover.

If you find out at the last minute, e.g. 9am, that you will actually be able to make it, you can offer to do your own class, but if the other

person has already put themselves out and reorganised their day to help you, it needs to be their call not yours. Ensure you update your GFM with the final arrangement.

#### Put it in writing

Remind people who are covering for you in writing, e.g. for a block of holiday covers two months from now, set them up, then the week prior, contact all your cover instructors by text, message or email and remind them of the class, time, gym and any tips or information relevant to that particular cover, and thank them in advance. Always thank them afterwards via a quick text, email or message, and offer to return the favour when they need a cover.

Ensure your GFM is also updated in writing, so that they can keep class information current for the members and pay the right person for the class. This also ensures that any member feedback will go to the right instructor.

#### Last minute procedures

Plan in advance whenever possible. If you do get stuck at the last minute though, due to sickness, family emergency or getting stuck in traffic for example, contact an instructor who is already in the club or on their way in for a class shortly, to see if they can jump in and cover for you. This is a good time to recruit the help of your GFM in order to avoid a class being cancelled. Your GFM will always be prepared to help you find cover at short notice.

#### Put the participants and club first

Endeavour to cover your class with high caliber instructors who will maintain your class numbers. Don't get someone who's not quite as good as you to cover just so that you look good: it's bad for business, bad for the club and ultimately bad for your ongoing relationship with your participants.



Look after your class members. If you're friends with your members on social media, let them know your situation and why you are getting your class covered and promote the instructor covering for you. Encourage the members to attend the class and support

<del>66</del>

## The 30-second article

- Instructors, not GFMs, should be responsible for covering their class should they be unable to deliver it themselves
- GFMs should set up a closed Instructor Facebook group and make it the primary method for instructors to find covers
- GFMs should establish a set process for arranging covers, and continually remind all instructors of it
- For the sake of a harmonious working environment and delivering the best experience to members, instructors need to employ simple good manners and clear procedures when securing a cover for a class.

the instructor and let them know when you will be back.

#### Be consistent

Try to use the same person to cover whenever you can. This provides members with consistency and enables them to develop a relationship with your cover instructor. For example, if you are away for three weeks and one instructor can cover your class for the whole time, then take that option rather than have a different instructor each week.

# Something's better than nothing

Think laterally if need be, and cover with a different style of class – making sure to get your GFM's approval before confirming. If you cannot find a BODYCOMBAT cover, for example, but can find someone who can do a freestyle boxing class, opting for this cover may be preferable to cancelling the class. On the other hand, the GFM may have additional contacts, or have a new team member under consideration that you are unaware of, so always check with them first.

It is advisable to set up a protocol whereby all long term covers or permanent



replacement instructors must be selected by the GFM.

An efficient group fitness team will run like clockwork, with clear communication running in all directions, ultimately providing a high quality, consistent timetable of classes for members. **N** 

Leisl Klaebe is Group Exercise Manager at Virgin Active Norwest, where she coordinates over 230 classes a week and a team of 90 group exercise instructors and PTs. She is also a Group Exercise Consultant and can be contacted at leislk@me.com





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# YOUR PERSONAL CONNECTION (YPC)

A new online tool helps Australian fitness and mind body professionals find jobs based on their skills, location and availability.

PC (Your Personal Connection) is a platform that pairs group fitness instructors and personal trainers with tailored jobs that suit their repertoire of qualifications and skills. This online tool has an impressive reach throughout Australia and is continuing to grow. Since YPC's successful launch last year in Sydney, a vast array of fitness businesses have used the service to locate instructors that suit their requirements.

At the helm of YPC are experienced fitness professionals with an extensive knowledge of how the industry operates. After noticing the lack of a niche job-search tool, fitness instructor and digital expert Lauren Bunce created the platform and leads alongside co-founder, Georgia van Tiel. Mentored by Tony de Leede, former CEO of Fitness First and owner of Fit'n'Fast, it is perhaps unsurprising that the platform has already attracted an impressive array of clients, from the larger gyms to bespoke and highly specialised individual studios around the country.

So, how does it work for instructors? For the standard listing, it doesn't cost anything to sign up, build your resume, list your areas of expertise and search for jobs based on your availability, location and skills. For \$10 a month, users can gain access to YPC's premium services, and be instantly matched to local studios and gyms that are looking for their specific skills. The site opens up the opportunity to be paired with facilities that you may not have previously come across, as well as to increase and manage your teaching hours per week, keep up-to-date with job listings and save time by applying for jobs directly.

Meanwhile, facilities seeking an instructor or trainer with a specific skillset can sign up to gain access to YPC's bank of fitness professionals, which can be searched based on education, expertise and experience. Plus, available jobs can be posted based on skillset, location and availability. Whether it's a new studio looking to build a class timetable or an established business looking to diversify its offerings, the platform was designed to save time and money in the hiring process.

Faye Hurlock, a yoga instructor listed on YPC said 'I found a great gig – a one-off corporate event that exposed me to a different audience I probably wouldn't have come into contact with. Communication with my new connections was straightforward and it was a really enjoyable experience. I'll use it again'.

In addition to jobs, YPC highlights local courses and events on the platform for continued education, growth and development.  $\bf N$ 

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# EVIDENCE-BASED PRACTICE:

# **CORE STABILITY AND TRANSVERSUS ABDOMINIS**

Clients may desire washboard abs, whereas trainers may focus on the role of core stability in injury prevention and overall health. But how effective is specific core training?

# **WORDS:** DR MARK MCKEAN PhD

bdominal and trunk aesthetics is a common discussion topic between personal trainers and their clients. Social media perpetuates this, showcasing an endless array of individuals with lean hard trunks and ripped abdominal sections performing a huge variety of the most obscure exercises imaginable. Every trainer you talk to about this will have a personal favourite exercise that hits them in just the 'right' spot. Trainers from different fields of exercise will all have different cues and language that describes the way you should contract your core muscles to get the best outcome.

Of course, it's not just about how good your six-pack looks. The key reason why core stability training has become prominent in training and research is the critical link of the lumbar spine providing structural control between the trunk and the hips and its role in prevention of low back pain and lower limb injury. However, core stability is now more commonly referred to as motor control stability. This allows us to use the concept globally across all joints and regions rather than just the trunk and lumbar spine. It must also be remembered that the value of motor control stability is in the way it acts to prevent motion rather than initiate it.

In looking at trunk stability, it must be remembered that the anatomy of the structures around the trunk and 'core' are far more complex than just the abs. Passive stiffness of the lumbar spine is provided by the osseoligamentous structures. The thoracolumbar fascia acts like a proprioceptor giving feedback to lifting activities, as well as being a large



spine inward, increasing lordosis. When contracted jointly with the diaphragm and pelvic floor muscles, they provide increased spinal stability. Rectus abdominis is typically trained to cause trunk forward flexion, and the thinking that crunches and sit ups are the only way to get rock hard abs has led to an over dominance of this muscle in all core work. In addition to these are the connecting muscles that attach to ribs and thoracic spine, as well as the muscles of the hip and thigh which all play a role in influencing trunk function. Finally, the muscles that are often forgotten when trunk strengthening are the diaphragm and the pelvic floor. 'True spine stability is achieved with 'balanced stiffening from the entire musculature, including the rectus abdominis and the abdominal wall; quadratus lumborum; latissimus dorsi; and the back extensors of longissimus, iliocostalis, and multifidus' (McGill 2010).

# Tranversus abdominis and hollowing

One of the common threads that has come through in all research is the need to maintain a normal lumbar curve in order to allow the trunk musculature to function effectively (Reeve & Dilley 2009). Research shows that maintaining normal lumbar posture is important for general spine health and care should be taken with lumbar flattening or allowing posterior tilting in exercises when targeting improved lumbo-pelvic control. McGill believes it is impossible to train muscles such as transverse abdominis or multifidus in isolation – people cannot activate just these muscles (2009). Hence, all the research around the contraction of TrA is questionable.

Watanabe et al. (2015) found that seated with an anterior tilt and standing postures where TrA was contracted, created more co-contraction of multifidus than seated with neutral or posterior tilted postures. In contrast, Pinto et al. (2011) found that patients with no low back pain were able to achieve increased thickness in TrA when in flattened lumbar spine, compared to normal lumbar curve, and people with low back pain were not. However, muscle activity of accompanying muscles of the trunk was not monitored, and abdominal bracing combined with flattening of the lumbar spine may in fact actively promote the rectus abdominis muscle. A study by Jung-Seok Lee and colleagues (2015) compared the abdominal drawing-in exercise using biofeedback with curl ups,

side bridges and bird dog exercises. They found little difference between the groups, although the TrA was found to be thicker after the intervention for the group focused on the abdominal drawing-in exercise. It has also been reported that drawing in the abdominals fails to target the major stabilisers of the spine and actually reduces stability (Potvin and Brown 2005), yet many trainers continue to promote this action when teaching core training exercises. A study by Koumantakis et al. (2005) compared the addition of specific stabilisation exercises, including specific TrA contraction, to a general back and abdominal muscle exercise approach for patients with subacute or chronic nonspecific back pain. They found that adding the abdominal hollowing, through trying to add TrA activity, actually reduced effectiveness of the activity and provided no additional benefit to patients with subacute or chronic low back pain.

The value of contracting TrA for sacroiliac stability has also been questioned. Richardson et al (2002) suggested if TrA is contracted independently of the other trunk muscles it would decrease laxity of the sacroiliac joint, yet Gnat and colleagues found no stiffening of this joint when contracting the same muscle (2015). Ainscough-Potts et al. (2015) reported that when the subjects sat on a ball supported by both legs, there was no change in the transversus abdominis and internal oblique activity. However, when subjects sat on a ball supported by one leg, the activity of transverse abdominis increased. It appears that single leg activity creates greater demand on these muscles than two-leg seated or standing postures. Most researchers agree that the TrA has a role in stability and needs to be trained separately to other trunk muscles and taught how to contract tonically (Hodges 1999). However, there remain questions over an individual's ability to contract TrA without the use of ultrasound.

Increased passive stiffness appears to be the end goal for many core training programs as it enhances load bearing ability, reduces painful vertebral micromovements, and enhances ballistic distal limb movement (Lee et al. 2015). These researchers found that isometric stiffness training was far superior in improving trunk stiffness when compared with a dynamic training program over six weeks. The researchers suggest this was due to the increased time under tension of isometric exercises and the low loads allowing people to perform them daily.



The key reason why core stability training has become prominent in training and research is its role in low back and prevention of lower limb injury.



# The 30-second article

- The anatomy of the structures around the trunk and 'core' are far more complex than just the abs – despite what Instagram fitspo may suggest
- Research has highlighted the need to maintain a normal lumbar curve in order to allow the trunk musculature to function effectively
- Despite reports that drawing-in the abdominals fails to target the major stabilisers of the spine and actually reduces stability, many trainers continue to promote this action when core training their clients
- One research review suggests that trainers should focus on implementing multi-joint free weight exercises, such as the squat and deadlift, rather than core-specific exercises, to train the core muscles in their clients.

#### **EMG** studies

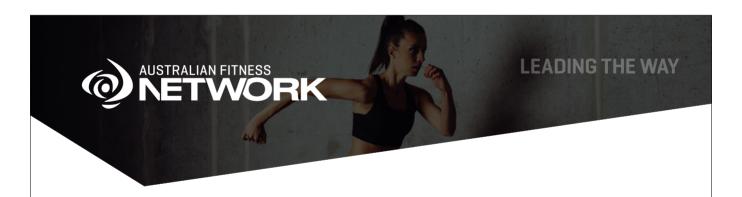
Many studies have shown that EMG (electromyography) activation in the rectus abdominis and external oblique muscles reduces with the start of the pelvis moving in the exercise e.g. sit ups (Monfort-Pañego et al. 2009). Research shows this increases compressive forces on the lumbar spine, a finding which has contributed to the suggestion that these types of exercises should not be prescribed. Martuscello et al. (2013) in their systematic review of core muscle activity reviewed a range of studies, including traditional core, core stability, ball, free weight and non-core related exercises. They report that none of the studies reviewed were high quality.

The outcomes of this review suggest free weight exercises, such as the squat and deadlift, produce more activity of the lumbar multifidus muscle, and all other forms of exercise appear to be equally effective at producing activity of the transverse abdominis muscle. The authors go on to suggest that adding isolated core exercises to supplement a comprehensive fitness routine

involving multi-joint free weight exercises is probably unnecessary to activate the core muscles. This review proposes that trainers should focus on implementing multi-joint free weight exercises, rather than corespecific exercises, to train the core muscles in their clients.

In summary, the concept of core stability is often a reductionist approach and has not really been shown to provide value to the average healthy client seeking to improve trunk stiffness. There are mixed opinions on the value of specific core training and in many cases research has shown that general activity is more effective than specific core exercises. Questions remain not only about an individual's ability to contract the inner muscles of the trunk, but also about the ability of a personal trainer to gauge whether the muscles being used or contracted are actually being utilised correctly. **N** 

Dr Mark McKean PhD AEP CSCS is a sport and exercise scientist and Level 3 Master Coach with ASCA. He is Adjunct Senior Research Fellow at USC.



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# **WORDS:** GUILLAUME TUAL

et's be honest, riding your planks down the slopes is exhilarating, thrilling and fun, but can also be challenging, risky and tiring if you're not fit for it. A lot of people assume that they just need to run on the treadmill and do squats to get fit for their ski holidays. Wrong. Snow sports are anything but linear, and although you're going down from top to bottom (hopefully not on your bum), there's a constant terrain adjustment, lateral weight transfer, G-Force control and balance that needs to be targeted during dry-land training.

I've trained a wide range of skiers and snowboarders, from novice to national team racers, and they all share the same foundations, so here are some tips to train your clients before they hit the slopes.

# **Conditioning for fun**

For the novice skier or snowboarder, it's important to remember that we are training them so they can enjoy their snow trip. Ski training needs to remain fun while focusing on muscle endurance so they can ski longer

and feel less sore the day after. A lot of bodyweight drills using cones are suitable at this stage, such as lateral shuffles, zigzag, colour call, and direction/speed change that will help load the quads and glutes and improve your client's cardio.

When skiers are tired on the slopes, they tend to stand up instead of remaining in the semi-squat position, so you should train your clients to sustain that triple flexion for as long as possible, and to make sure their knees don't cave in (the infamous skiers' 'A-Frame' problem, when the knees are closer together than the feet). Using a Theraband around the knees during training will force the glute medius to stay active and keep the hip-knee-ankle aligned. You can increase the difficulty by holding that position on a BOSU ball (flat side up) and throwing a light ball at your client for them to catch (up/down and side-to-side), but make sure they keep their knees aligned with hips and ankles.

On the off days when they aren't training with you, recommend they go for a run outside using hills and stairs (glute work) or a bike ride, or participate in an indoor cycle class. The earlier they start their training, the fitter they will be on the slopes, so you can incorporate these drills into clients' training programs as soon as you become aware that they are skiers.

### **Conditioning for performance**

For the more advanced ski bum, the drills described above are still valid, but you will also need to focus the program you create for them around strength and explosiveness. Chances are, your more advanced skier or snowboarder likes to hit the park, ski powder and



ride all day, so their legs and trunk muscles need to be rock solid.

With these clients I always start with some plyometric drills (lateral box jumps, side steps, jump down with side hop). The explosiveness will help in faster directional changes, take-offs and landings, and will also enable them to ski for longer.

The strength phase can be done with any weights, and although squats and deadlifts won't do any harm, I prefer curtsy lunges, single leg lunges (TRX) and step-ups. You should focus on time under tension with a long eccentric/short concentric ratio to push the muscle fatigue threshold (Koller et al. 2015). Pistol squats are often a favourite drill with athletes, but they take time to master. Any drill that will make gluteus maximus/medius and VMO (vastus medialis oblique) work together to stabilise the hips and knees is a winner.

Of course, legs aren't everything, and if your client doesn't have a stable trunk, there will be a lot of arm flapping on the slopes! Obliques are very important to counteract the G-Force effect and avoid over-rotating when turning (shoulders should always face down the slopes and arms remain forward). Cable or band drills like Pallov Press, horizontal wood chop and single arm row work just fine, and you can increase the difficulty by standing on a BOSU and increasing eccentric timing. Loaded movement using a ViPR is also very efficient, as it trains the body for changes of terrain (DeadShifts, halos and rotations).

I may make a few enemies out there by saying this, but here goes: I don't believe in planks. To work my clients' core I prefer to use some primal movement drills such as the Animal Flow Static Beast (with limb lifts), Underswitch, Scorpion Reach and Side Kickthrough. These work the oblique, anterior and posterior slings to increase stability while carving the snow.

## Conditioning for injury prevention

Always remember that snow sports are very different from other physical activities, particularly with regards the footwear and weight of equipment used. Ski and snowboard boots lock you in a semi squat position and totally change the user's gait. The most common ski injury is ACL/MCL rupture due to the ski torque force and hamstring weakness, whereas snowboarders are more often prone to fractures (ankle, collar bone and wrists).

Because skis and snowboards are controlled through micromovements of the feet, it's important to get your client to really connect with the base of their feet. For this reason, it's advisable to check their ability to dorsiflex, and to implement some barefoot training.

There is a strong correlation between the deep foot stabilisers and the deep core stabilisers, so I recommend including barefoot drills like lateral lunge and single leg deadlift/squat, as well as fascial tensioning drills using small dumbbells that mimic ski movements. Dr Emily Splichal (ebfa.com) offers some great advice on barefoot and fascial training.

# Ski training needs to be fun, while focusing on muscle endurance so clients can ski longer and feel less sore the day after



# The 30-second article

- Skiing and snowboarding are not linear activities, so incorporate the three planes of motion into training programs for clients who ski
- Glute activation is crucial for controlling knee tracking and alleviating quad work
- Trunk rotation drills will increase overall stability and balance
- Focus on eccentric loading, especially for hamstrings and quads
- Ankle dorsiflexion and hamstring length/strength will reduce the risk of injury
- Barefoot training increases body awareness and core activation.



Lateral lunge

Another key body part that is often forgotten during snow sport training is the hamstrings. They are extremely important for counteracting anterior-directed ACL shear forces and for increasing the dynamic stability of the knee (Aagaard et al. 1998, Tourny-Chollet & Leroy 2002) when it comes to breaking a fall and stopping the knees from hyperextending. Usually when the hamstrings are weak, the cruciate ligaments of the knees take the toll and tear during a fall. One of the best exercises to strengthen the hamstrings is the Nordic Curls (eccentric loading of hamstrings).

Finally, a body that moves well is a happy body, so mobility is very important when it comes to carving the winter slopes. Unfortunately, most of our clients are stuck behind a desk for most of the day and lack hip mobility and proper spinal rotation. I always take my clients through a mobility



and release session that I order them to do once to twice a week on their own. We start with releasing the plantar fascia by standing on massage balls or battle rope and then move up the calves, hamstrings, quads, glutes and lats using a foam roller or a myofascial release stick. Thoracic rotation drills help maintain the upper body fluidity.

If your existing clients are heading to the snow this winter, you can easily implement these sport-specific drills into their programs to make them better prepared for a great time on the slopes. Snow sports are a very different type of activity due to the nature of the equipment and terrain, so it's important to prepare accordingly in order to minimise the risk of injury. Just remember that clients are going on ski *holidays*, so keep their snow training fun! **N** 

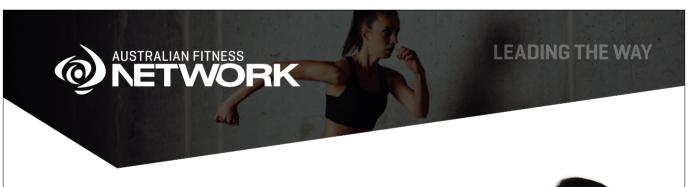
Guillaume 'Gee' Tual is a Sydney-based movement and snow sport conditioning specialist with over 15 years' experience in the ski industry. As a personal trainer and Animal Flow instructor, he trains his clients to be better movers and maximise their time on the snow. peakmovement.com.au



Releasing the plantar fascia



Thoracic rotation



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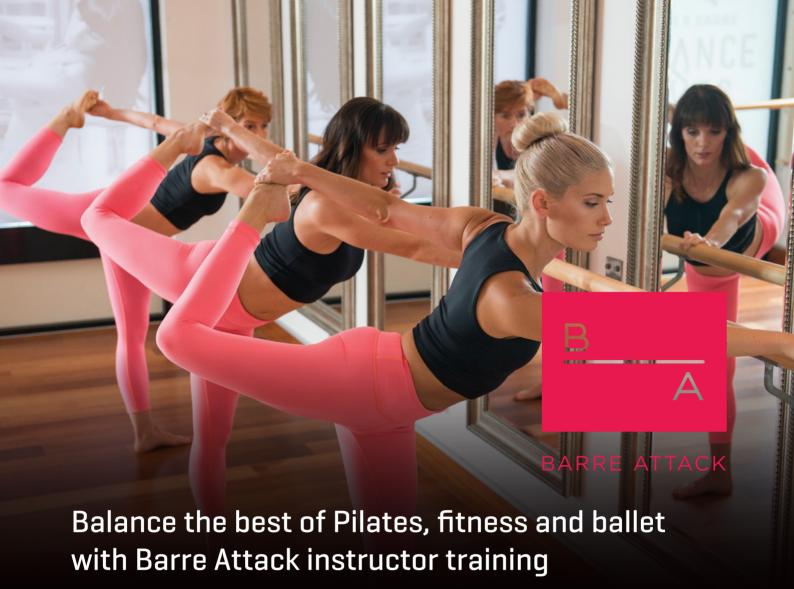
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# & REHAB

# **RESPECT THE NERVES!**

Certain exercises and stretches can aggravate clients' nerves – but some simple postural adjustments can be all it takes to reduce risk of neural tension and discomfort.

**WORDS: MERRIN MARTIN** 

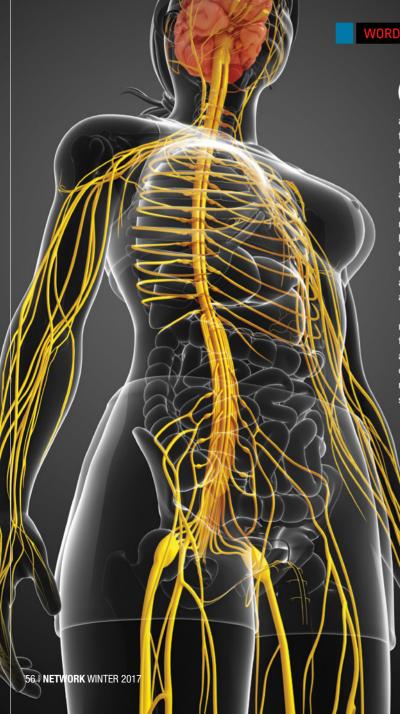
remember long ago when I started out in the fitness industry, completing my ACHPER course and wearing my leg warmers in the 80's (yes there's a vision!), I learnt about how to stretch a muscle. One of the favourites to include in fitness classes was a hamstring stretch. During my classes I would do a straight leg hamstring stretch and tell the participants to flex the foot or pull their toes towards them to increase the hamstring stretch. I thought I was challenging my class to increase their range of motion and give them a better class as a result. Little did I know that while doing this stretch I was increasing the neural tension in the leg. I never considered whether a class participant could have had a past hamstring tear with neural adhesions, or whether they could be an office worker with a history of low back pain and weak pelvic stability causing piriformis to spasm and increase neural tension. I never asked anyone about their history of lumbar spine disc injuries causing an increase in neural tension... so much to learn!

When I think back to the stretches I was instructing, I could have made a lot of my clients feel worse, as opposed to challenging them to increase a stretch. Participants would routinely comment to me at the end of class that they felt a sharp pull in their calf muscles or behind the knee and did not achieve a stretch in the hamstring muscles. Have you ever heard this from clients or participants? If so, read on.

# You've got some nerve...

Let us recap some anatomy of the nervous system. There are two main components to the nervous system: firstly, Central Nervous System (CNS), comprising mainly of the brain, brainstem and spinal cord; and secondly, the Peripheral Nervous System (PNS), which connects the spinal cord with our limbs and organs. When we stretch the arms and legs within an exercise session, we are mainly putting tension on the PNS. However, we must remember the CNS and the PNS cannot be separated and are one continuous structure within our bodies. Anything we do with our arms and legs can also be felt elsewhere in the body.

Nerves are not elastic and therefore do not respond well to static stretching. Nerves are





# The 30-second article

- Nerves are not elastic and do not respond well to static stretching, or to compression
- Be aware that you are not only stretching one muscle when you give a stretch
- The nervous system is a continuous system throughout the body, so your body posture, head, foot or hand position can actually make your nerves more irritable within a given stretch
- Muscle, nerves, veins, arteries, fascia and connective tissues, joint capsules, and ligaments may increase tension and reduce range of motion within a stretch
- A simple change in posture can help reduce risk of neural tension during clients' training sessions.

more like a tight piece of thick string that, if stretched under static load, will become irritated. Do not push through the hamstring stretch if you feel a pull in the calf muscle. In addition, they do not respond well to compression. So if you think that using a foam roller to apply super hard pressure to your sciatic nerve will help to ease pain, think again! Rather than being put under prolonged stretch tension or directly compressed, nerves need a pathway free of pressure to travel through the body and ensure we are pain-free and functioning optimally.

# **Getting on clients' nerves**

Clients with irritated nerves may vocalise a feeling of having ants crawling up their skin, water moving on their skin, or an increased awareness of a particular part of the body. They may report tingling or pins and needles in a particular area, or a localised numb feeling or loss of sensation. As symptoms worsen, they may report a shooting or electrical pain, hot pain, or stabbing pain that is very sharp in quality. A physiotherapist can do a specific neural assessment that may also reveal additional nerve symptoms, such as loss of reflexes or overactive reflexes, or reduced strength and control within a certain group of muscles that correlate to a particular level of neural compromise.

If your client has these severe symptoms, they must be referred onto a health professional for further diagnosis of the origin of their pain before continuing with their exercise program.

# PT's Top Tips for optimal nerve function

- 1 The first thing to remember, when you instruct a client to stretch, is that you are increasing the tension, pull or static stretch on every structure that limits movement at a particular joint in a particular direction (i.e. hip joint flexion). The structures responsible for increasing tension and reducing range of motion within a stretch could be muscle, nerves, veins, arteries, fascia and connective tissues, joint capsules, ligaments and so on. Be aware that you are not only stretching one muscle when you give a stretch.
- 2 Secondly, all of us are made differently, with unique tissue extensibilities and genetic makeup, and, therefore, we will all feel a stretch differently. There is no advantage in doing a hamstring stretch when the problem limiting an increase in range of motion is pins and needles in the foot and no stretch in the hamstring. Always ask your client where they are feeling a stretch and what the stretch feels like to them. This may shed some light on whether they are feeling the muscle stretch correctly.
- 1 Third, bear in mind that the nervous system is a continuous system throughout the body. Therefore, your body posture, head position, foot position or hand position can actually make your nerves become more irritable within a given stretch. It is important to take note of the posture of your client when they feel any nerve symptoms, and to make sure you avoid this body posture within a given exercise session. For example, a client may say they get tingling in their hands when they do a pec stretch at 90 degrees of abduction. But it may be the fact that their head is turned away or laterally flexed from the shoulder they are stretching, which increases neural tension in the median nerve in the upper body, resulting in the tingling sensation in the hand. Returning the head to a more neutral position, and making sure there is a slight bend in the elbows, may be enough to decrease the pull on the nerves. Be aware of the whole body posture when performing stretches.

# 10 common mistakes that may increase neural tension

The following behaviours during a workout may increase neural tension, so familiarise yourself with the solutions and educate your clients about how a simple change in posture can help reduce this risk.

- Cervical flexion, i.e. looking at the floor when performing exercises (cervical plexus tension)
  - **Solution:** Keep neck in neutral forward looking position
- 2 Pulling the scapula/shoulder girdle down and back excessively when doing upper body exercises (cervical plexus tension) Solution: Perform correct backward tilting of the scapula without excessive depression of the scapula during upper body exercises.
- 3 Sitting on a hand to perform a neck stretch and/or pulling the neck with the other hand (cervical plexus tension)
  - **Solution:** Very gentle movements of the cervical spine, don't hold a stretch longer than 5 seconds for the cervical spine and never sit on the hand to pull down the shoulder or pull the head in the opposite direction.
- Tilting the head away from an arm when you are stretching (cervical plexus tension)
  - **Solution:** Keep head looking straight forwards or towards the hand/arm you are stretching to reduce neural tension. Relax the opposite arm by your side.

- Straight leg hamstring stretches (sciatic nerve tension)
  Solution: Perform bent knee hamstring stretches with a relaxed ankle. Bring the knee in toward the chest as far as possible before attempting to straighten the knee. This way the proximal or upper hamstring will have more of a stretch sensation and the neural tension behind the knee will reduce significantly.
- 6 Excessive wrist flexion with upper body weights (median nerve tension)
  - **Solution:** Keep wrists neutral and not flexed when performing rowing or lat pulldowns to reduce the tension on the forearm or wrist flexors, thereby helping to offload the median nerve in the carpal tunnel.
- Bilateral (both arms) doing pec stretch position (brachial plexus tension)
  - **Solution:** Perform upper body stretches one arm at a time with neck and head in a neutral position, and relaxed shoulder position.
- 3 Sitting in a 'C' curve or rounded spinal position (slumped rounded kyphotic posture) to do weights, i.e. seated leg press (spinal cord tension)
  - **Solution:** Ensure your client is not doing leg weights in a seated position, rather do standing or upright functional leg strengthening exercises. Make sure their posture is in a more neutral spine position and not a rounded sitting posture.
- Rounded lumbar spine in deadlift posture (sciatic and spinal cord tension)
  - **Solution:** Make sure knees are slightly bent to reduce tension. Keep lumbar spine in neutral position and slightly lordotic

- posture. Don't tuck chin in to chest rather keep a slight gap between chin and chest.
- Sit and reach test position worst combination of bilateral straight leg stretch with rounded posture and cervical flexion! (spinal cord flexion)

**Solution:** If you are sitting in a long sitting position, sit on a block to reduce slump of the lumbar spine, bend your knees slightly or place a towel under your knees and keep your spine and head as upright as possible. This will reduce pull and tension on your nerves.

When I reminisce about my aerobics days in the 80's, I wish I had more awareness of what structures I was affecting with my stretches and exercises. It is important to remember that you are not only working muscles, but all the other structures that work in unison with the muscles, including the nervous system.

Of course, if there are neural symptoms which worsen during a session, you must always stop the exercise and refer the client to a health professional for diagnosis. Never push through the neural symptoms – respect the nerves!  $\bf N$ 

For references read this article at fitnessnetwork.com.au/resource-library

Merrin Martin, BAppSc (Physio), BSpSc (Ex.Sc) is the founder of Active Anatomy Physiotherapy & Health Professional Workshops in Sydney. An experienced physiotherapist, exercise scientist, health educator and clinical Pilates instructor, Merrin is a highly respected expert in exercise rehabilitation. activeanatomy.com



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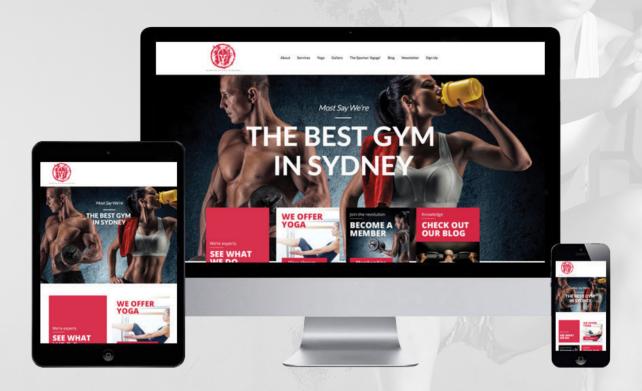
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By adapting HIIT to the dynamic aquatic environment, you can give your participants a superb workout that's high in intensity yet low in impact.

# **WORDS: CHRISTINE NAYSMITH**

here's a reason that high intensity interval training has been the industry trend of recent times: it's very effective at igniting cardiovascular and metabolic benefits, including improvements to insulin sensitivity and reduced blood pressure. The downside, for some, is that high intensity also sometimes equates to high impact. Water exercise offers a protective environment with reduced impact, functional core strengthening and mobility benefits. Combine HIIT with the pool and you have a marriage made in heaven!

The pressure and resistive forces of water (hydrostatic pressure) aids venous return (blood flow back to the heart), which results in an increase in stroke volume. This

effect decreases heart rate even though the exercise intensity is at a peak level. This decrease in heart rate and rapid recovery time makes water-based HIIT suitable for a range of participants.

# Measuring intensity

The scale or rate of perceived exertion (RPE) is a simple and effective way to gauge intensity. Aqua classes are often attended by a range of participants with varying fitness levels and for this reason it's best to empower them to monitor their own exercise intensity. While heart rate monitors are now waterproof, instructing participants to measure the exercise intensity subjectively, on a scale of 1 to 10 (where 1 is no effort and 10 is maximal effort) provides a simple and quantifiable personal motivational skill.

#### Accurate work bout-to-rest ratios

Several online music providers or apps offer options to include an interval timer into music tracks – check out 'HIIT interval training timer'; 'Interval Timer - Timing for HIIT Training and Workouts'; and 'Seconds - Interval Timer for HIIT, Tabata Training', for starters. The benefit to you, as the instructor, of using music or an app with set timed ratios is that it allows your focus to remain on the observation, analysis

and modification of the exercise technique rather than clock watching.

# Instructor motivational techniques

Just as participants exercise at different intensities, so too do they respond to different motivational techniques. Because HIIT training requires participants to exercise for short, high intensity bursts, they may need additional encouragement to maintain the level of effort over numerous bouts. How they like their motivation dished up, however, will vary.

While some may respond to drill sergeant-style instructors yelling 'give me 10 more', and others might prefer instructors who compete with them to 'show them how it's done', the 'ideal' instructor encourages, inspires and sets realistic work bouts to gain the most effective physiological and biomechanical outcome for each participant.

Just remember that although HIIT is, by its nature, highly intense, it doesn't mean that your vocal motivation has to mirror it: yelling louder doesn't result in participants exercising more effectively or efficiently. Voice projection within a busy, noisy and often humid environment, such as a pool, is often a challenging instructor skill in itself. If you can get the necessary volume





### The 30-second article

- HIIT training in the water generates cardiovascular and metabolic benefits without the high impact, and with the additional benefits facilitated by the properties of the water
- Using an app with set timed ratios allows you to focus on participants' exercise technique, rather than on the clock
- Using a Partner Tabata format encourages healthy competition as well as social connection
- Other HIIT formats that work well in the pool include the '50/10' (50-second work bouts followed by 10-second active recovery) and '30/20/10' (progressive intensity work bouts).

and delivery without sounding harsh or aggressive, you're well on your way.

#### **Formats**

Try one of the following HIIT-style formats in your aqua classes, and then experiment with the others as your confidence in the format grows.

# Format 1: Partner Tabata/competitive training watch video

This Tabata training protocol involves performing a particular exercise at the highest intensity for 20 seconds, followed by 10 seconds of recovery. This is repeated for 8 sets, totalling 4 minutes duration.

My class participants enjoy the competitive nature and social connection of this format. The short burst of effort encourages the 'competitors' to achieve personal bests with absolute warrior determination (competition) and immediate feedback from their partner (social connection).

An example of a 20-second Tabata interval might see partner 1 performing mermaids and counting the total number of repetitions they complete in the set time period, and partner 2 treading water at the highest intensity, lifting the chest out of the water.

At the end of the first interval, partner 1 informs their competitor of their result (the number of repetitions), which then becomes the target for partner 2 to match or beat as they proceed to swap exercises. Exercises are alternated between partners for each interval over the 8 sets. Attempting to match or beat the number of reps is the name of the game for the agua partner Tabata format.

When it comes to designing Tabata aqua exercise combinations, aim to select a move or sequence that elicits the highest heart rate. As we know, aqua exercise intensity is dependent upon a range of variables, including water depth and temperature, lever length and water turbulence, so the best way to figure out which moves work best for aquatic HIIT is to try them out.

However, to get you started, you may want to consider the following moves, which are high enough in intensity and can be counted easily: plyometric stars, fast and powerful rock'n'roll, and Murray rivers are most appropriate for the moderate/high intensity exercises performed by partner 1, while weighted moves such as intense long arm chest press or ski arms are suitable for partner 2.

# Format 2: 50/10 ( ) WATCH VIDEO

This format features 50-second work bouts followed by 10-second active recovery, and is effective in both shallow and deep water.

Our aqua instructor training tells us that travelling in the resistive forces of water will elicit higher oxygen consumption when compared with stationary exercises. Longer and larger limbs will also create greater friction and water turbulence than shorter and smaller limbs and thus will also affect the movement of the body and intensity level of moves during deep water travel.

Examples of moves to use during the 50-second work bout (with or without a flotation device) include:

- Side flutter travel
- · Supine seated travel
- Rock'n'roll travel.

Examples of 10-second active recovery moves include:

- · Seated long arm press
- Rock'n'roll stationary
- Big Ms.

# Format 3: 30/20/10 ( ) WATCH VIDEO

This format comprises three progressive intensity work bouts of the same move with variation in delivery. Each bout increases with intensity and does not allow for any rest period for a total workout period of sixty seconds. As a more challenging HIIT format, you should be very mindful of whether it is suited to your participants.

"

# When it comes to designing Tabata aqua exercise combinations, aim to select a move or sequence that elicits the highest heart rate

The concept features:

- 1. moderate exercise intensity for 30 seconds (allowing the mind and body to familiarise with the movement pattern)
- 2. variation of the move to increase intensity for a further 20 seconds
- 3. warrior workout zone for the final 10 seconds (suspended move variations are good for ramping up the intensity).

You should then be ready to instruct the next sequential movement pattern of 30/20/10-second bouts.

An example of three 30/20/10 sequences could look like this:

Workout intensity	Move		
30 seconds – moderate	Sliding x country ski		
20 seconds – increase	Plyo x country ski		
10 seconds – warrior	Suspended x country ski		
30 seconds – moderate	Jogging		
20 seconds – increase	Jog & travel		
10 seconds – warrior	Suspended travel		
30 seconds – moderate	Single leg side kick		
20 seconds – increase	Double leg side mermaid		
10 seconds – warrior	Suspended side rock'n'roll		



Your participants may not be ready for HIIT sessions to replace their regular aqua classes, but you could certainly introduce the concept, either as a section of a regular class, or by alternating with your usual format.

Offering this sort of diversity in your aqua programming will not only keep you inspired, it will also encourage participants to return for more – especially when they start to reap the rewards of the aquatic HIIT workout.  ${\bf N}$ 

Christine Naysmith presents the AUSTSWIM WETS Aqua Instructor Course across Australia and New Zealand and works behind the scenes in course development. A popular group fitness instructor, she uses her background in drama and education to keep participants entertained and on their toes! austswim.com.au/wets-aqua





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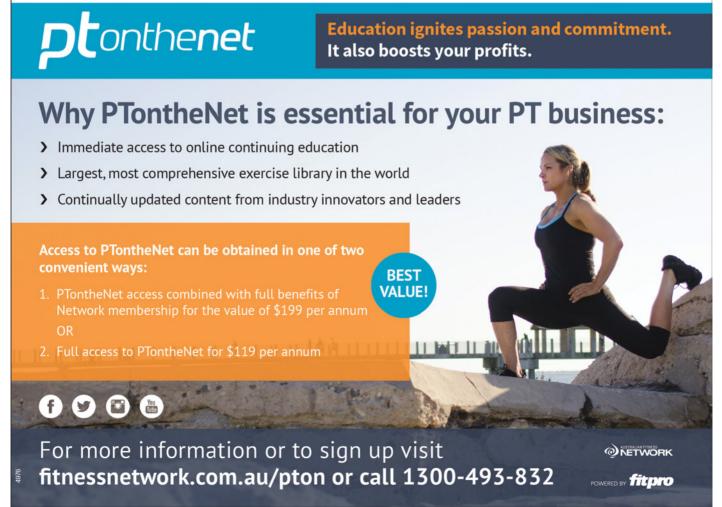
# WEEKLY MEAL PLANNER

Plan your weekly meals to help keep your healthy eating and training goals on track.

	Breakfast	AM snack	Lunch	PM snack	Dinner
Sat					
Sun					
Mon					
Tues					
Wed					
Thurs					
Fri					

SHOPPING LIST								
Meat	Dairy	Deli	Other	Frozen				
	Meat							







News and views from the New Zealand fitness industry.



# REPs reaches out to educate and motivate the public



While January may be the month of New Year's resolutions, for many businesses in New Zealand, 1 April marks the new year, especially when it relates to business plans, budgets and the inevitable finishing off the accounts for the previous year.

With that in mind, it's really exciting to note that April saw the first in a series of new public facing messages start to roll out from the NZ Register of Exercise Professionals (REPs) as part of its 2017 public promotion campaigns highlighting why it's so important use a registered exercise professional.

The promotions will initially use social media channels, and feature images and videos that both explain and promote the use of registered exercise professionals to the public. One of the best, and unique, elements of the videos is the heavy use of exercise professionals from various settings – so it's real industry people you'll see featured.

The first video 'We are REPs', which can be seen on the REPs web site reps.org.nz, features several trainers explaining that all education of PTs is not equal, and discussing why it's so important to use a registered trainer. You can see more of REPs promotions by following them at facebook.com/nzreps

The idea is to not only promote these videos via REPs

channels, but to also provide them as tools for trainers and facilities to use to promote their association with REPs to their own clients and members.

This marks a significant development in the confirmation of REPs as the quality mark of the exercise industry. Now that REPs has a critical mass of over two thirds of all exercise professionals registered, it means the messages to the public can make a clear case for not only using a registered trainer and registered facilities, but also instil confidence that by using the search engine, they will be able to find both facilities and trainers conveniently located close to where they live or work.

By educating the public, and making it easier for them to find reputable fitness professionals that can facilitate their health and fitness, we are taking another step on the road to positively affecting the lives of more New Zealanders.

Richard Beddie CEO, ExerciseNZ info@exercisenz.org.nz



# Kiwis cross the ditch to experience FILEX 2017

Once again ExerciseNZ hosted Kiwi drinks at FILEX, and with almost a hundred Kiwis attending in 2017, many of them took the opportunity to catch up with industry friends from the homeland at the networking event, now in it's tenth year.

FILEX has always been a popular event for Kiwis to attend, and with its return to Sydney, and a truly world-class line-up of presenters, 2017 saw one of the biggest NZ contingents for some years.

# NETWORK

# CATALOGUE

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fitnessnetwork.com.au/pcc

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