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NEWSLETTER AND P.N. MINUTES for 8TH May 2023

The meeting opened at 10.05 am

ATTENDANCE : Celia Miraglia, Barbara Morris, Faye Holloway, Eileen Senn, Philip Surtees, Mike Kiff, Laurel Morris, Chris Holloway, Carole Collins, Ron Gascoigne, Faye Breslin

APOLOGIES : Jenny Wilkins, Lorainne Keen, Margaret Hunt.

CONFIRMATION OF MINUTES OF LAST COMMITTEE MEETING as circulated being true and correct.

Accepted: Philip Surtees

Seconded: Celia Miraglia

CORRESPONDENCE ; Received.

Connect Group, A.C.N.C., Phone Call from Margaret Majewski.

TREASURER'S REPORT AS AT 08/05/2023

RECEIPTS		PAYMENTS	
Membership	10.00	Morning Tea	20.00
Donation	15.00	Stationery	33.35
Attendance	20.00	Postage	87.50
Accident Cream	127.50		
Total receipts	\$ 172.50	Total payments	140.85
Balance b/f			985.13
Bank ACCOUNT			
Cheque A/c paid	140.85	Deposits	172.50
Balance b/f	1016.78		
TOTAL	1157.63		1157.63
Balance c/f			1016.78
ACCOUNTS FOR PAYMENT		Accepted : Celia Miraglia Seconded : Philip Surtees	
Postage	47.75		
Mobile Phone Cr.	100.00		
Total	147.75		

GENERAL BUSINESS

There was again, a general around the table discussion re symptoms of P.N. causes and effects. Ron reminded members that care should be taken to not directly advise others to take any medication or supplements (including dosages). We can tell them what others have found beneficial and suggest they should ask their doctor to consider whether it would be suitable for them. The Doctor will know their overall condition, current medications and likely interaction with any new medicines etc This will avoid you being held responsible for any negative outcomes.

Philip has bought himself a pair of 'waders' from K Mart for \$8.00 and says they are very comfortable for walking etc.

Applications for Have-a-go day came up again as bookings for a slot is required by the end of the month for the occasion in November. It was suggested we apply again, but during discussion it was decided that it was a lot of work for such a few people that it would be better not to apply again.

It was moved by Faye Holloway and Seconded by Celia Miraglia that: We do not apply to have a slot again this year.

A new member attended and she was diagnosed with bilateral idiopathic lateral neuropathy and she doesn't have diabetes. She was quite dismayed at her diagnosis and didn't know really where to turn for answers. Some members were able to talk to her sympathetically after the meeting and show empathy towards her.

There was a general discussion on symptoms and what can help with neuropathy in the hands and feet. e.g. to still be able to drive, one can have the car converted to hand controls from Indigo, as an example, for about \$2000.

Next was a discussion to find an alternative Chairperson for Ron. He will not be volunteering for another year at the AGM. We would like someone else to take over responsibility for the Group. Otherwise the Group is looking at closure at the end of the year. There have been no offers as yet, but if anyone out there feels up to taking over the Chair, please let us know, we need you.

We were notified that one of our members, Henry Dodds had passed away.

With nothing further to discuss the meeting closed at 10.55 am

The PN Group will meet again on Monday 12th June, 2023 at The Niche, Cnr. Hospital Avenue and Aberdare Road, Shenton Park

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JOKE TIME

A solicitor opened an office in Melbourne. It had a great view in a prestigious building. He hired a secretary and some office furniture. At 9.00 am on his first morning he sat at his desk and started sharpening his pencils. At 11.15 am his secretary knocked at his door, saying a man was here to see him.

Fabulous, he thought, my first client. I really must make a good impression. So he told his secretary to send in the bloke. He picked up his phone and as the man walked in, he said: *No I won't accept a million for my client. I want three million and not a penny less!* And slammed the receiver down. He looked up at the man and said: *Now, what can I do for you Sir?*

The bloke said: *I'm from Telstra. I've come to connect the phone.*

more glucose and fat to make more ATP when your cells need it during exercise or other exertion, creating a "metabolic reserve," he explains.

Mitochondrial biogenesis—the making of more mitochondria—has been found in studies to be tied to how much total training you do. Because Zone 2 training is more sustainable than more intense exercise, you can do more of it and thus build more mitochondria.

Studies show that moderate exercise like Zone 2 also induces your cells to clear out old, malfunctioning mitochondria through a process called mitophagy. Higher-quality mitochondria have a greater capacity for fat oxidation and oxidative phosphorylation, the final stage of cellular respiration. Lower-quality mitochondria have been associated in studies with insulin-resistant states like Type 2 diabetes and metabolic syndrome. When mitochondria are of higher quality, as they are in elite athletes, research has found that they can switch back and forth between using fat and glucose (aka metabolic flexibility) to create ATP quickly and efficiently. But in people with insulin resistance, the mitochondria are less robust and less efficient at using glucose and fat. Zone 2 increases the quality and number of your mitochondria, improving your ability to fuel your efforts—you're fitter, so you can stay stronger for longer.

Zone 2 improves insulin sensitivity. Insulin sensitivity describes how well the body responds to insulin. When you eat carbohydrates, your blood glucose levels rise above baseline, and the pancreas releases additional insulin, which helps shuttle the glucose into cells for energy or storage. When insulin sensitivity is low, your pancreas needs to send out more insulin to deal with the same amount of glucose. A person with low insulin sensitivity is insulin resistant, which, in the long term, is a state associated with increased risks of Type 2 diabetes and cardiovascular disease, among other conditions.

All forms of exercise improve insulin sensitivity in the short term. Your body will grab 50 times more glucose from your blood when exercising than when you're sitting still, which is why walking after a meal—in Zone 1 or 2—can be such an effective method for managing blood glucose spikes. Scientists are still studying whether Zone 2 creates unique improvements in insulin resistance. Still, the magic of Zone 2 is that, unlike HIIT or other types of faster cardio, you can do Zone 2 for much longer—in some cases, almost indefinite—periods, giving your muscles more time to use more glucose.

Zone 2 improves insulin-independent glucose uptake. Glucose use that's triggered by insulin is called "insulin-dependent." But there are ways your body can be prompted to take glucose into the muscles independent of insulin. Exercise, because it contracts the muscles, gets this process going, Laye says. When both the insulin-dependent and insulin-independent pathways are working at the same time, much more glucose can be removed from the blood, he explains.

Zone 2 exercise specifically improves these insulin-independent pathways. In a 2021 study, scientists found that a 60-minute Zone 2 session increased the insulin-independent rate of glucose disposal by 67–97 percent in people without diabetes.

One way that both insulin-independent and insulin-dependent glucose uptake occurs is through a protein called the GLUT-4 transporter. GLUT-4 molecules are moved to the membranes of muscle cells by insulin and muscle contraction, D'Agostino says. Once there, they signal the cell to open up and let some glucose in, taking it out of the bloodstream.

This happens after a single bout of exercise and over the long term: "As you improve your metabolic conditioning and increase the muscle cells' ability to contract and sustain exercise, these adaptations will upregulate the

number of GLUT-4 transporters and glucose transporters in general," D'Agostino says. In other words, more GLUT-4 transporters can be deployed to the membranes of cells to let glucose in. "For a given amount of insulin, you'll have a proportionately greater amount of GLUT-4 moved to the membrane and a proportionally greater amount of glucose disposal," he says.

Zone 2 exercise reshapes your heart. Your heart is a muscle, and working that muscle for a long time, as you do with Zone 2, makes it stronger.

"With endurance training, the heart's chamber gets bigger, and the thickness of the left ventricle also gets bigger in proportion. Your heart can hold more blood, and you have more heart muscle to contract the blood out," Laye says. The "ejection fraction," or the percentage of blood that gets pumped with each beat, increases with moderate-intensity exercise. A stronger heart muscle can pump more blood and increases your capacity for all kinds of activity—at higher and lower intensity, he says.

Zone 2 training improves oxygen capacity—and longevity. When you start exercising, your breathing rate and heart rate rise. The increased breathing rate allows your body to expel waste products like carbon dioxide and bring in more oxygen for your muscles, which is a critical component of manufacturing ATP. But there's a maximum amount of oxygen your body can use at once, known as your "VO2 max." This number is an indication of how fit you are.

Zone 2 exercise (like all cardiovascular exercise) improves VO2 max. This has wide-ranging and beneficial implications for your health. "Humans have a 'frailty' level," which is a sort of tipping point for our overall health and fitness, Laye explains. "If your VO2 max falls below that level, your risk of dying goes up dramatically." In a 2018 study of more than 120,000 people, scientists found that those with a higher VO2 max lived longer. In the

study, people with "low" levels of cardiorespiratory fitness were 4-6 times more likely to die during the course of the study than those with "elite" levels. But it's not just elites who live longer: People who were below average were 40 percent more likely to die than those above average. The effects of cardiorespiratory fitness on early death, the researchers found, were more significant than for smoking.

In addition, research shows that exercising over the long term gives your heart the ability to be "younger." "If you look at people who do endurance exercise throughout their lives, you can have a 70-year-old with the same VO2 max as a 40-year-old," Laye says. "Zone 2 training, in particular, is really effective at increasing both components that make up VO2 max—cardiac output and the muscle mitochondrial part."

How to determine if you're exercising in Zone 2

Getting into the zone is key. There are many equations—some simple, like 220 minus your age, and some complicated—that can estimate your maximum heart rate (MHR), but they're just estimates. In studies that have examined MHR in large populations, some subjects in their mid-20s had MHRs as high as 220, while others of the same age were around 170. Zone 2 training using the "220 minus age" equation wouldn't work for either of those people—the work will either be too easy to provide adaptations or too hard to be sustainable. Finding your own Zone 2 will give you the correct heart rate, so you can establish an exercise intensity that you can maintain for long sessions.

Here's a simple test to find your specific Zone 2.