



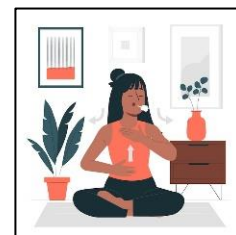
MILLHOUSE INTEGRATIVE MEDICAL CENTRE

PARTNERING IN HEALTH AND HEALING

NEWSLETTER JUNE - JULY 2023

Kia ora koutou - a warm welcome to the Millhouse community and other readers,
Rain, more rain and three winter months to come. How frustrating this is!

Did you try the short breathing exercise I mentioned in the [last newsletter](#)? Some refer to this as a *physiological sigh*. You breathe in, pause, inhale again to totally fill the lungs, and give a long outward SIGH (could be audible) emptying the lungs completely. Repeating this exercise for 5 minutes has a profound relaxation effect on the autonomic nervous system. Perform this whenever stress, anxiety and frustration comes your way.



Recently a patient told of the frightening tornado experience when, along with 50 other East



Auckland families, he lost his house roof. Later I visited friends near Muriwai. Motutara and Waitea Road were still closed to non-residents three months after Cyclone Gabrielle had devastated the North Island, leaving 125 uninhabitable red-stickered houses at the beach settlement. Many others are suffering too and I am often recall the axiom 'a problem/worry shared is a problem/worry halved'. Talk to someone - your partner, friend or work colleague - about your distress; remember too your family doctor can enrol you in the free Wellness Programme. An appointment with Vani, our [HIP/Behavioral Health Coach](#), can also provide support and assistance with social and whanau issues.

Covid continues with a new dominant Omicron strain, nicknamed 'Kraken', after the legendary Scandinavian sea creature which doomed ships and sailors to their grave. Thankfully, although this variant appears more infectious, it is less harmful than previous viral strains. However, continue to be vigilant if you are susceptible to respiratory illness, and use the approaches discussed in the [last two years of newsletters](#), to maintain a healthy immune system.



During lockdown the Ministry of Health (MOH) was generous in funding community treatment of COVID infection but there has been little ongoing support for [Long COVID](#) sufferers, where infection continues beyond three months. I still hope that Long COVID will bring renewed interest in the understanding of the chronic viral fatigue that has always affected 1% of the population. In the February newsletter, I suggested Low Dose Naltrexone might be worth trialing for any struggling with Long COVID.

Recently researchers at Milan's San Raffaele Hospital in Italy demonstrated in a [controlled observational study](#) on inpatient COVID patients, that those with low Vitamin D levels at discharge were far more likely to develop LONG COVID, especially those suffering with ongoing brain fog. They recommended all COVID in-patients receive a follow-up vitamin D test at discharge. Would taking vitamin D supplementation be a useful strategy in helping to prevent LONG COVID? Until a randomised trial is done, the answer is unknown, but my recommendation is that all post-Covid patients continue taking higher doses of Vitamin D, a cheap and relatively harmless supplement that may well be shown to ameliorate LONG COVID symptoms.

[Another report](#) highlighted that those with LONG COVID lacked a healthy diversity of bugs (microbiome) in their bowel. So don't forget to eat a variety of unprocessed, and preferably fresh, fruits, nuts, and wholegrains, with plenty of greens and root vegetables that nourish a healthy microbiome.

In this newsletter, I discuss the importance of mitochondria, the amazing organelles that the power each cell, and continue the conversation on the value of exercise, which is probably the most important lifestyle intervention for health and extended longevity.

MILLHOUSE NEWS

NEW PATIENTS are still being accepted by Millhouse.

PATIENT EMAILS to our doctors may not be answered. We are receiving more and more emails which take considerable time to read and answer, although no service fee is charged. If you have an urgent problem, please speak to one of the Practice Nurses about your concerns.

NURSE PRACTITIONER GABRIELLA is a highly-skilled and insightful health professional trained to investigate, diagnose, and manage illness as well as prescribing treatment. She is a valued member of the medical team and has a particular interest in child, teenager and women's health and the management of diabetes. Some of you will have experienced her skill in assessing acute problems when your doctor has been unavailable. Don't hesitate to see her to discuss any concerns and she will liaise with your doctor.



HEALTH IMPROVEMENT COACH VANI is available by appointment, at no cost; book through Reception.

DOCTOR CONVERSATIONS can take place in a variety of languages and each of us has particular medical interest highlighted in the table.

FLU VACCINATION at 130 Millhouse is now available. Book an appointment to see one of the Nurse team.

BEXSERO VACCINE against [meningococcal group B disease](#) is also available and funded for children between 8 weeks and 12 months, and for 13 to 25-year-olds in specified close-living situations.

Dr Aileen	Child & women's health complex medical conditions, IUCD insertion - Cantonese & Mandarin
Dr Dan	Nutritional medicine
Dr Ric	Acupuncture, nutritional medicine, minor surgery
Dr Satya	Child & women's health, IUCD insertion. minor surgery - Tamil, Teluga, Hindi
Dr Stephanie	Child & women's health - Korean
Dr Therese	Child & women's health, IUCD insertion - Arabic



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MARVELLOUS MITOCHONDRIA – THE CELL'S ENERGY SUPPLY

In 1898 microbiologist Dr Carl Benda observing sperm cells with a light microscope noticed an encapsulated shape with threads (*mitos*) and granules (*chondros*) which he called collectively *mitochondria*; today much more is known about this specialised cell structure found in most cells of the body.

It is thought that eons ago mitochondria were bacteria which merged symbiotically with eukaryotic cells (those with a nucleus and genes). In exchange for food and protection from the high oxygen environment at that time, mitochondria gave the host cell extra energy for survival. This action allowed the evolutionary development of plants, animals and humans. Mitochondria have their own independent gene centre (inherited from mother, with multiple copies of circular DNA) which prompts production of extra cell energy in the structure's folded inner membrane linings. The protein-complexes in mitochondria convert food and oxygen to a high-energy ATP (adenosine triphosphate) molecule that powers more than 90% of the biochemical reactions in a cell. Around a billion ATP molecules are found in the average cell, and these are recycled three times every minute, occupying 25% of the cell space and contributing about 10% of the body's weight.



Cell mitochondria numbers can range from several hundred to thousands, especially in active organs like the heart, skeletal muscle, and brain and also the ovary's dividing egg cells, which number more than 100,000. Despite the presence of the protective antioxidant molecules that slow adverse reactions, mitochondria are easily damaged by becoming overheated and producing unstable *free-radical* sparks. When cell energy falls below 10%, specific molecules initiate cell recycling centres that remove damaged mitochondria and initiate mitochondria reproduction.

The HEALTH of your
MITOCHONDRIA is reflected in your

- Energy level
- Resilience to stressors
- Resistance to disease
- Aging and longevity

The mitochondria are not just an energy factory; they also respond to adverse environmental conditions (such as unstable free radicals, inflammation, toxic chemicals, radiation, or drugs) with a 'danger response' reducing energy and focusing on cellular defence. When we are young, mitochondria are abundant and efficient, but after 40 years most people have significant mitochondrial dysfunction; one study demonstrated 85% damaged mitochondria in skeletal muscle in a 90 year-old man.

Since the 1980's the [Mitochondrial Theory of Ageing](#) has suggested that as mitochondria suffer wear and tear, especially free-radical damage, they lose efficiency and function, leading to chronic disease, ageing, and cancer; mitochondria are a biological clock of the ageing process.

LET'S TALK - MOVE MORE

In the last newsletter I mentioned that positive lifestyle choices have far-reaching impact, "undoing" a wide range of chronic diseases. I introduced Professor Dean Ornish's book ['Undo It: How Simple Lifestyle Changes Can Reverse Most Chronic Diseases'](#). He recommended a specific set of lifestyle options that can reverse heart disease, early prostate cancer, type 2 diabetes and a number of chronic ailments. (This is not surprising as many diseases, like chronic inflammation, or ongoing emotional distress, share common underlying biological pathways). Ornish's lifestyle programme has four components - **eat well, move more, stress less and love more**.

This month, let's talk about **moving more**. In January, I discussed the magic of exercise to improve health and wellness. I mentioned that short bursts of intense exertion, followed by rest, improve lung function, and are a strong [predictor of longevity](#). This means that intense mild to moderate forms of aerobic exercise - running, walking, swimming, and cycling - use more oxygen and **increase the muscle-cell mitochondria count by as much as 50% in six weeks**, even in older people.

Aerobic Exercise also releases Brain Derived Neurotrophic Factor (BDNF) from our muscles; this increases brain cells in the frontal cortex and hippocampus, supporting learning, memory, higher thinking and ability to adapt to stress (neuroplasticity). However, undertaking extreme physical activity, such as an ultramarathon, is detrimental because unstable free radicals cause damage and inflammation to skeletal muscles, the heart muscle and even other internal organs. Resistance training (weightlifting, resistance bands) has little effect on building mitochondria numbers and the release of BDNF, but can prevent age-related muscle-wasting (sarcopenia), which is common in the elderly.

What exercise will help you achieve:

- Independent safe living – dressing, showering, preparing meals, not falling, getting up off the floor, using high & low cupboards, climbing stairs & walking up steep hills, visiting & carrying bags at supermarket, driving a car.
- Participating safely in enjoyable activities – travelling overseas, carrying own luggage, walking & hiking with friends, swimming, playing bowls golf, croquet, skiing.
- Improved disease control- diabetes, heart disease, asthma & chronic airways, Parkinson's, memory issues, cancer, depression & anxiety and more.

So we know exercise is good for us, but it's hard work, and few are motivated to go to the gym or see a personal trainer. Let's rethink the problem. What life goals do you have that will need stronger muscles and aerobic fitness to achieve them? See the sidebar for a list. Consult an exercise trainer for an individualised fitness plan. If you are already struggling with independent living, enrol in the 'Falls Program' and get a personal exercise programme formulated by a visiting physiotherapist.

Be proactive this year and increase your exercise routine.

Noho ora mai - stay well, look after yourself and goodbye for now.

Dr Richard J Coleman

[\(Recommended book\)](#)