



MILLHOUSE INTEGRATIVE MEDICAL CENTRE

PARTNERING IN HEALTH AND HEALING

NEWSLETTER SEPTEMBER–OCTOBER 2023

Kia ora koutou - a warm welcome to the Millhouse community and other readers,

Rain and more rain in Auckland till now. Some, like me, escaped to warmer places but many Northern hemisphere countries have experienced devastating summer heat. In Rome we were advised to stay inside during the 35° midday heat, and fires ravaged Greece, especially the island of Rhodes where 30,000 were evacuated. In recent weeks, many perished in the inferno that ravaged the beautiful Lahaina village in Hawaii, and in Canada this year half the area of New Zealand has been consumed by fire. Global warming is real, and we need inspirational leaders to motivate humanity to seek a greener response.



Talking of leadership, its election time again and parties are offering sweeteners to entice your vote. If only our Parliamentarians would formulate 'cross-party' long term strategies for health, education, social welfare and care of the environment, we would make greater gains. For decades we have filled health vacancies with overseas nurse and doctor graduates, instead of increasing university student training in NZ.

We have also been remiss in not updating the alcohol legislation for many years. I'm ashamed New Zealand has [30,000 children](#) (more than 2000 babies born each year) with Fetal Alcohol Syndrome (FAS), a lifelong irreversible disability which is totally prevented by not drinking alcohol in pregnancy. FAS now costs the taxpayer an estimated \$450 million each year in medical and social support. There are 1000 liquor outlets in Auckland, concentrated in South Auckland and the CBD. In 2022 Chloe Swarbrick attempted to pass her 'Sale and Supply of Alcohol Amendment Bill' to ban alcohol advertising in sport and give local council power to limit liquor outlets. This bill was shelved but Labour's '[The Sale and Supply of Alcohol](#) (Community Participation) Amendment Bill' has just passed its third reading to become law.

VAPING'S SERIOUS SIDE EFFECTS

- Is highly addictive (nicotine).
- Increases the risk of asthma.
- Can cause acute lung illness needing hospital care (deaths have been reported)
- Can lead to permanent lung scarring & popcorn lung.
- Damages other organs - brain & heart.
- Increases probability of cigarette smoking.
- Vaping ingredients are known to cause cancer.
- Vaping batteries can explode causing burns.

Perhaps we should consider introducing a 'minimum unit alcohol price' as in Scotland, which has the highest rate of alcohol related deaths in the UK. In 2018, a minimum unit pricing for all drinks sold (1 unit=10ml pure alcohol=50 pence, the higher the alcohol content greater the sale price) was introduced; five years later research [shows 'significant reductions in alcohol-specific deaths'](#), especially amongst the most socio-economically deprived.

In November 2020 the disastrous 'Smokefree Environments and Regulated Products (Vaping) Amendment' was passed, allowing multinational Tobacco Companies to accelerate the sale of e-cigarettes and vape products. Now over [10% of teenagers are vaping daily](#). It's not just nicotine addiction, which may lead to cigarette smoking, but that the inhaling of solvents, heavy metals and chemicals can cause serious lung disease and even cancer. Vaping products should have been restricted to pharmacies or be available only on prescription, as we have now with nicotine patches and gum.

Labour wants to remove GST on Fruit and Vegetables. I wonder if consideration was also given to increasing GST on high-sugar processed foods and drinks that accelerate the onset of chronic disease and are huge financial burden to the health system. In October 2022, [United Kingdom retailers](#) were forbidden from placing high fat, sugar, and salt foods in prominent positions in the supermarkets. Jane Clifton's recent Listener column noted that this action has reduced the profits of confectionery companies, so it is having an effect. I want a new government that enacts policies creating a safe society and environment, that promote justice, and advocate for all.

In this newsletter I will continue the discussion on mitochondria, the amazing organelles that power each cell and provide body energy, then focus on the process of AUTOPHAGY, stimulated by fasting, which removes cell rubbish and renews mitochondrial energy function.

MILLHOUSE NEWS

EXCITING NEWS - PAM CHAPMAN is Millhouse's first **HEALTH COACH**. Pam will journey with you to improve your health and wellbeing. Pam can provide you with skills and encouragement to adopt a healthy less-stressful lifestyle, guide you in weight-loss, and assist improvement of your diabetes, cholesterol, and blood pressure. Pam's service is FREE, and she is available each weekday morning and all Tuesday. Ring Reception to arrange a 20 minute appointment.



MASKS are to be worn at Millhouse if you have a COUGH, COLD, or COVID. When you arrive, please wait in your car or outside the surgery and phone Reception. You will be invited to enter when your doctor is free, and required to wear a mask, which are available in Reception. Mask-wearing will lessen the risk of giving infection to our vulnerable patients.

NEW PATIENTS are still being accepted by Millhouse.

WHAT IS A NURSE PRACTITIONER? Many have asked what [Gabriella](#) had to do to become a Nurse Practitioner. See textbox below or visit <https://www.nurse.org.nz/do-you-want-to-become-an-np-in-new-zealand.html>

NURSE PRACTITIONERS (NP - Matanga Tapuhi) are independent practitioners who have undergone rigorous training acquiring special skills over 4 years as they study for a Master's in Nursing university degree. Their scope of practice exceeds a registered nurse. They are able to undertake a comprehensive patient health history & examination, arrange investigative tests (blood, Xray, CT scan, Ultrasound scan), formulate diagnoses, and activate appropriate treatments which may include writing prescriptions, specialist referral and giving lifestyle advice. A NP can assess injuries, perform Driver's Licence & Insurance Medicals and issue Off-Work & Death Certificates and Work & Income forms. NZ currently has 700 NPs.



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MARVELLOUS MITOCHONDRIA – THE CELL'S ENERGY SUPPLY

In the [last newsletter](#), I mentioned that eons ago mitochondria were bacteria which merged with larger nucleus/DNA containing cells (eukaryotic) to provide energy. Because mitochondria retained their own independent DNA/genes, they could immediately respond to stress, converting food and oxygen to high energy ATP that powers more than 90% of the biochemical reactions in a cell. However, intense mitochondrial activity generates heat with electron sparks (free radicals), impairing their function, and when cell energy falls below 10%, specific molecules initiate recycling, removing damaged mitochondria and initiating production of new mitochondria.



I also mentioned that mitochondria are not just an energy factory but counter adverse environmental conditions 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. As mitochondrial suffer wear and tear, they lose efficiency and function, leading to chronic disease, ageing, and cancer; mitochondria are a biological clock of the ageing process.

MAGIC OF EXERCISE

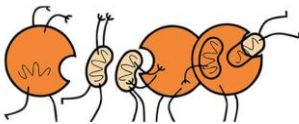
I also discussed how exercise improves health and wellbeing and mentioned that short bursts of intense exertion, followed by rest, is known to improve lung function, [a strong predictor of longevity](#). Intense mild to moderate forms of aerobic exercise - running, walking, swimming, and cycling - use more oxygen and increase the muscle-cell mitochondria count by as much as 50% in six weeks, even in older people. However, be aware that extreme physical activity can be detrimental by damaging and inflaming the skeletal muscles, heart, and even other internal organs.

HOUSE CLEANING

It is a delight when our house is 'spick and span', cleaned, tidied, with furniture correctly placed ready to receive visiting friends and family. It is the same in cells. In an earlier newsletter ([August 2019](#)) I highlighted the research of Dr Maiken Nedergaard (University of Rochester) who demonstrated that during NON-REM SLEEP glial cells in the brain generate a pulsating rhythm, expelling waste such as the amyloid debris associated with the onset of Alzheimer disease into the cerebrospinal fluid surrounding the brain. Refreshing sleep is essential for good health.

AUTOPHAGY

All eukaryotic (with a nucleus) cells have a complex survival cleansing mechanism known as 'autophagy' (the Greek means 'self-eating') for the removal of waste and defective and dead mitochondria (mitophagy), as well as recycling cell components. Autophagy occurs when cells are deprived of oxygen or nutrients or are damaged in some way. ATG (autophagy-related) proteins then carry the rubbish to lysosomes, tiny intracellular membrane spheres, filled with digestive enzymes which degrade the debris ready for cell recycling; this survival process conserves resources and improves cell efficiency. However the effectiveness of



autophagy declines with age; the resulting disorder is now [linked to the onset of neurodegenerative diseases](#) (Parkinson's, Alzheimer's disease, Amyotrophic Lateral Sclerosis), cancer, non-alcohol fatty liver disease (NAFLD), diabetes, heart disease, inflammatory bowel disease and more.

FOOD & FASTING

Our hunter-gatherer ancestors didn't eat 4-5 times each day, consuming highly processed food, sugary drinks and alcohol. They lived a very different existence, catching, killing and eating wild animals and consuming plants and berries in season. We have the same body and genes that were forged in this environment of scarcity, or occasional plenty when a massive indulgence of food was possible. It would be wise for us to intentionally stimulate the autophagic process (see table opposite) that cleanses and renews each cell in our body.

EXERCISE regularly. **EAT LESS**. It's ok to feel hungry. Stop the junk food, use a smaller dinner plate or like the Okinawans say "*Hara hachi bu*" which is a reminder to stop eating when your stomach is 80% full.

CONSIDER FASTING. Begin with a shorter fast of 10 hours and lengthen the period of not eating. You may want to try **INTERMITTENT FASTING** where two healthy meals are eaten each day during an 8-hour window, with no food for 16 hours. Most lose weight. If you consider undertaking a more prolonged fasting, chat with your doctor first.

Fasting will preferentially use inflammatory fat in the liver and pancreas as fuel, improving the insulin resistance that is especially helpful in treating obesity, NAFLD and diabetes.

['The Fast Diet'](#) by Michael Moseley & Mimi Spencer is a useful resource.

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

Dr Richard J Coleman

references available on request

BENEFITS OF AUTOPHAGY

- **Decreases** free radical damage.
- **Protects** against DNA/gene damage.
- **Slows** aging of cells.
- **Increases** effective use of cell nutrients and elimination of waste.
- **Assists** in elimination of pathogens & foreign material from the cells.

AUTOPHAGY IS TRIGGERED

By sending cells into survival mode through:

- **Fasting**, at least 16 hours or more, which deprives cells of nutrients and forces them to repurpose cell components for energy.
- **Restricting Calories** which deprives the body of food and stimulates autophagy to compensate for lost nutrients.
- **Exercise** can induce the ATGs that trigger autophagy to keep cells functioning.

Note that switching to a high fat-low carb diet – a keto diet – may trigger autophagy.