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SCHOOL
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CREATIVE RESEARCH AND INNOVATION

Distributed geography - rural, marine, islands - interconnected

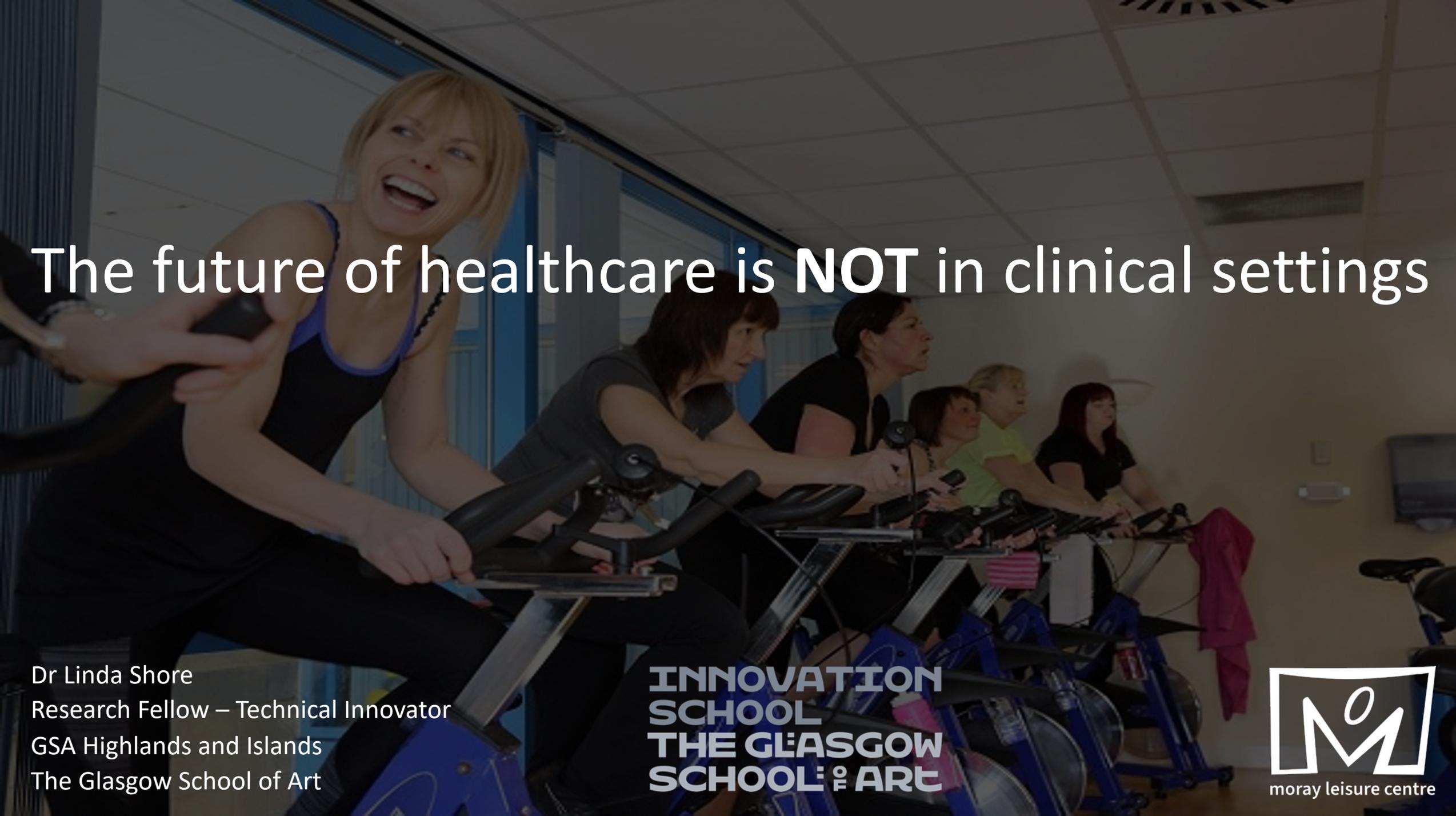
The power of interdisciplinary research and practice to create collective solutions to shared problems

PORTFOLIO

- Interaction Design
- Environmental Design
- Circular Economy
- Future Heritage

- Digital Health & Care (DHI)
- Artificial Reality/VR
- Soil and food futures
- Education Innovation
- Wellbeing Economy

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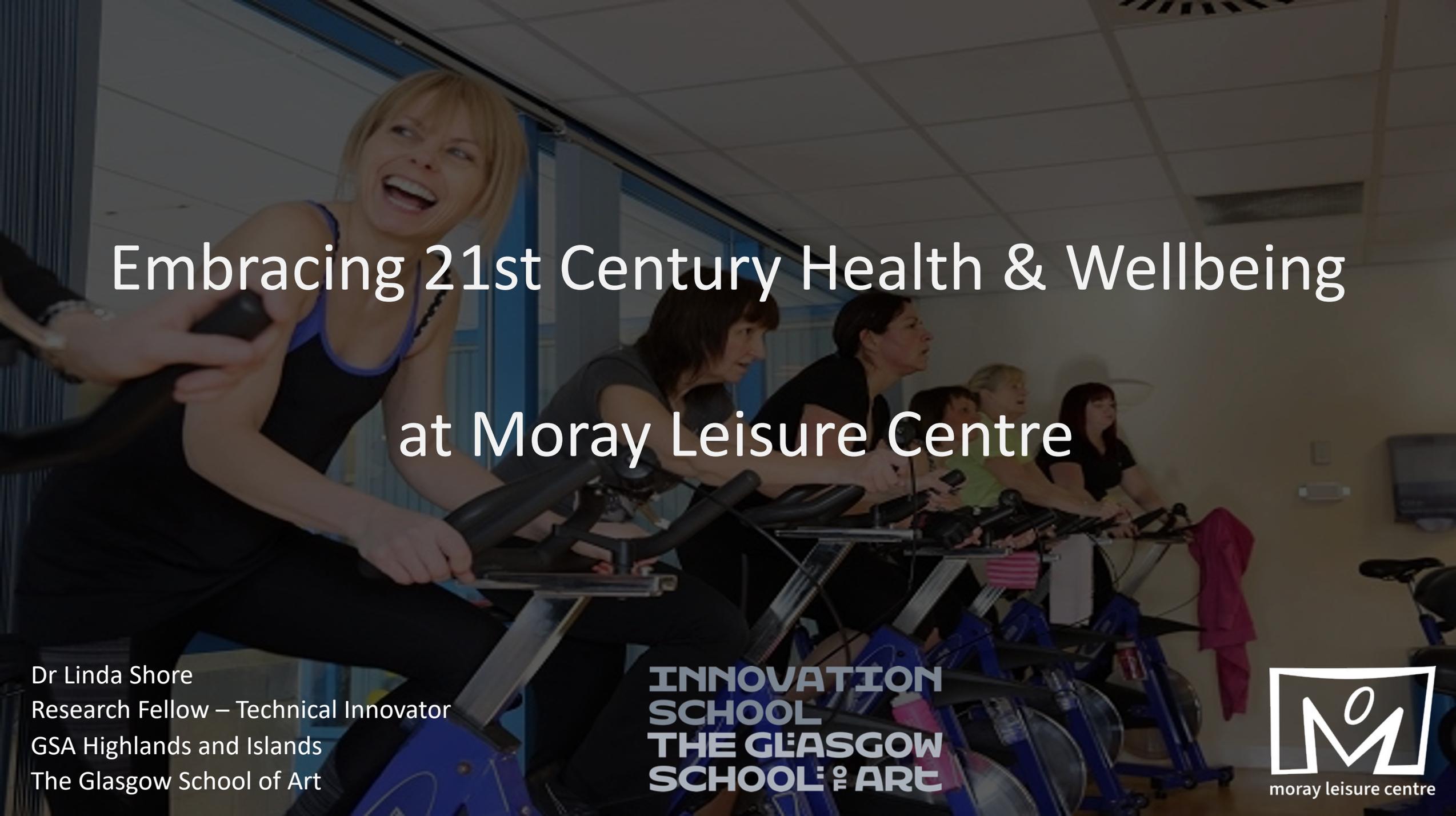


The future of healthcare is **NOT** in clinical settings

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Embracing 21st Century Health & Wellbeing at Moray Leisure Centre

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In the UK

More than one-in-four adults are physically inactive

One-in-three children do less than half the physical activity recommended for their age

(Keech, 2022)



Exercise & physical activity improves emotional health & wellbeing and is a key aspect for children's motor and cognitive development.

Lack of physical activity and its impact on health costs the **NHS 1 BILLION annually!**

(Keech, 2022)

Healthcare & Economy

“Globally, there are inequalities in levels of physical activity between women and men, girls and boys, old and young, and the socio-economically advantaged and disadvantaged – **this is unfair and unjust**”

WHO, 2022

* Nearly half of new **NCD cases (47%) will result from hypertension

43% will result from depression

* Physical inactivity costs health systems US\$ 27 billion a year and by 2030, US\$ 300 billion.

– if we do nothing

WHO, 2022



* Global stats

** Noncommunicable diseases (NCDs) – heart disease, cancer, chronic respiratory disease, diabetes

But first.....



“it’s not about the pink it’s about the paddling”

(McDonough et al., 2011)



Menopause - a pathway to successful ageing (or not)



Moray Leisure Centre

Published by **Moray Leisure** · 18 October 2022

Today is [#WorldMenopauseDay](#)

The menopause is an important life transition that usually happens between 45 and 55.

For some, symptoms are mild and for others they are more severe, however, the timing and symptoms are different for everyone.

We are delighted to let you know that we are working with Mel Allan to bring you a series of workshops, support groups and fitness classes specially tailored to those affected by the menopause.

To register your interest and receive further information and dates, please DM us with your email address or email info@mlc-elgin.co.uk

For now, here is a great page put together by NHS inform about the menopause, including a myth busting video →

<https://nhs24.info/menopause>

The poster features a vibrant pink background with a pattern of small pink flowers and green leaves. A large, stylized green female symbol (a circle with a vertical line and a horizontal crossbar) is the central graphic. The Moray Leisure Centre logo is in the top left corner. The text 'Menofit' is written in a large, bold, pink font, with 'Launch Event' in a smaller pink font below it. At the bottom, the event details are listed in a smaller, dark pink font.

Menofit
Launch Event

Monday, 28th November @ 7pm

With Grant Cumming BSC (Hons) MSc(H) FRCOG MD &
Dr Kerry Cottonach, GP & GMS Menopause Specialist



The future of healthcare is NOT in clinical settings



Four Key Drivers to a 21st Century 'Leisure' Centre?

Breathe | Eat | Sleep | Move!

However,...

5 Key Drivers to a 21st Century Health-E-Space

- Breathe
- Eat
- Sleep
- Move!
- +
- GROW

“People being healthy in a building that is healthy”

– John O’ Kane



5 Key Drivers to a 21st Century Health-E-Space

- Breathe – **Altitude Lab**
- Eat – **Nutrition Lab**
- Sleep– **Sleep Lab**
- Move! – **Gait Lab**
- +
- **GROW** – Sustainable building - carbon neutral

“People being healthy in a building that is healthy”

– John O’ Kane



Breathe – Altitude Lab in MLC

- Asthma is a major global health problem affecting over 300 million people worldwide (*Saxer, et al. 2019*)
- Can be considered a suitable treatment option for patients with a persistent uncontrolled asthma (*Fieten, et al., 2022*)
- Scientifically proven to assist weight loss, reduce blood pressure and much more (Altitude lab, UK)
- Habitual Physical Activity associated with lower risk of Chronic Obstructive Pulmonary Disease (COPD)(*Chen, et al. 2022*)



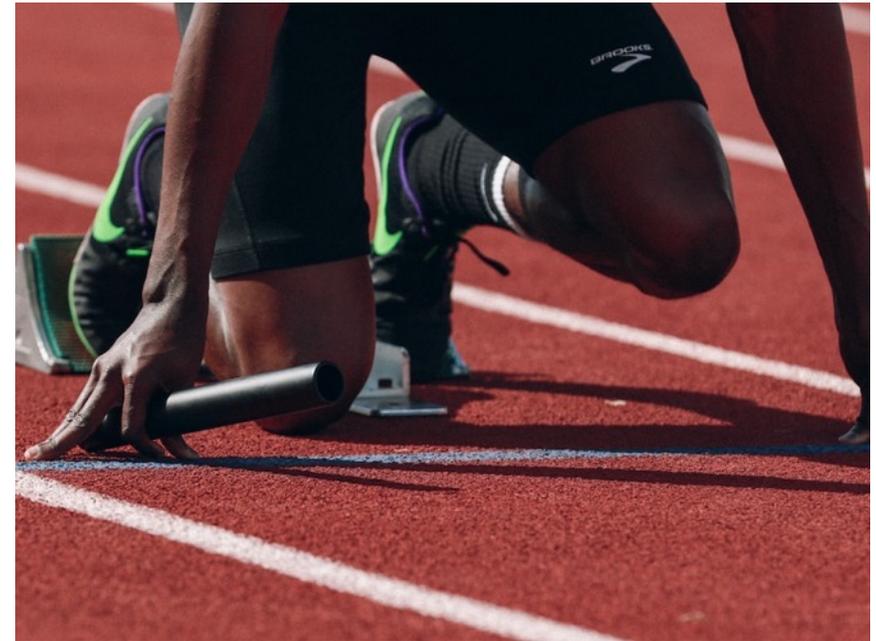
Sleep – Sleep Lab in MLC

- Challenges to sleep as part of life transitions e.g., menopause (Tutia, *et al.* 2019)
- Sleep problems impacts on elite athletes' well-being and performance (Rice, *et al.*, 2016)
- Sleep studies are undertaken to diagnose sleep disorders (Mayo Clinic)
- Sleep Apnoea may be a risk factor to stroke (Culebras, 2015)



Move! – Gait Lab in MLC

- Research Innovation Centre
- Research in a controlled environment such as a gymnasium are understudied (Schmidt et al., 2021)
- Assistive Technology such as Functional Electrical Stimulation can enhance experience in a gym setting (Bulley et al., 2011)
- Post-menopause estrogen replacement may be a factor in maintaining muscle strength and enhancing muscle trainability and thus be important in maintenance of static and dynamic balance and the potential risk of falls in older females (Perry, et al., 2005)



Future Work - **GROW**

...aligns with compatible partners in working towards a net zero future

BE—ST

Built
Environment
—
Smarter
Transformation

Some Barriers to Physical Activity

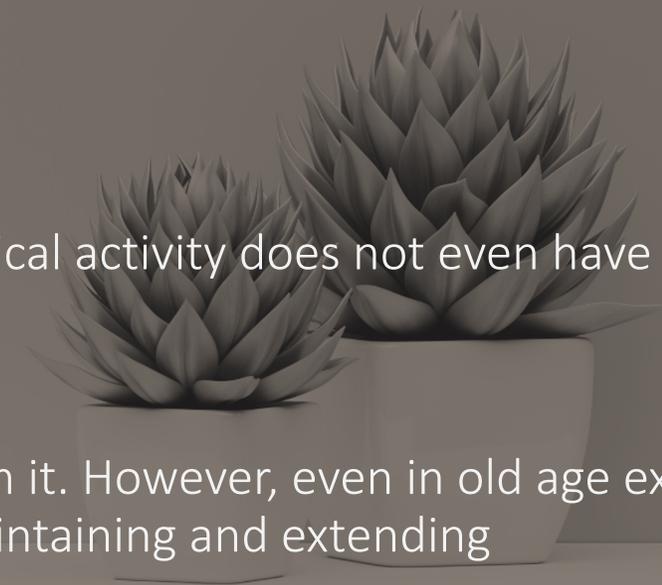
Stigma: Patients can often feel that exercise is not for ‘people like them’, even though it is for everyone, regardless of age, ability, weight, or background.

Pain: Many patients with long term conditions have concerns about the safety of exercising. However, for patients with chronic conditions, the benefits of physical activity far outweigh the risks

Financial: Being more active does not have to be expensive

Time: Formal exercise does not have to involve hours in the gym, and physical activity does not even have to be separate from day-to-day living.

Age: Many patients may feel they are too old to exercise, or to benefit from it. However, even in old age exercise can safely confer benefits including reducing the likelihood of falls, and maintaining and extending



Healthcare & Economy

“Globally, there are inequalities in levels of physical activity between women and men, girls and boys, old and young, and the socio-economically advantaged and disadvantaged – **this is unfair and unjust**”

WHO, 2022

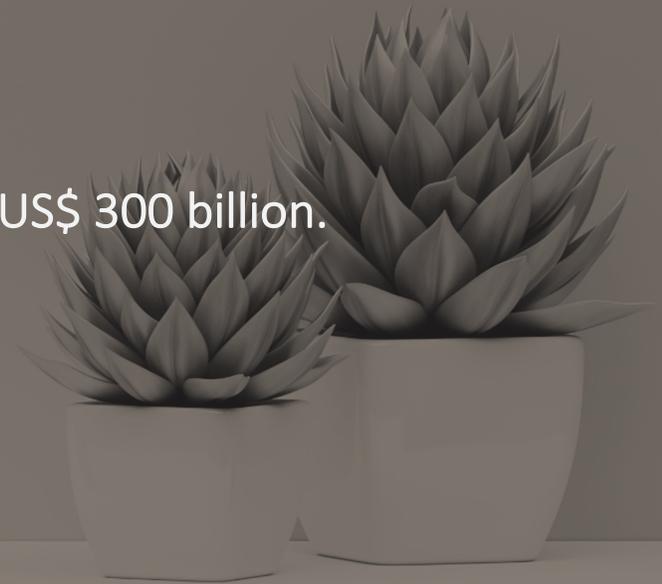
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Thank You!

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