Physical Activity
Tips for a GP Practice

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Faculty/Presenter Disclosure

- **Faculty:** Jean-François Bérard

- **Relationships with commercial interests:**
  - **Partner at Pure Lifestyle Ltd**

Mitigating Potential Bias

- Content is not intended to support the conflict of interest
- Content is focused on providing information to help provide physicians with added confidence in physical activity recommendations


EXIT
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Fun Theory – Stairs vs Escalator

Source: www.adage.com

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OBJECTIVES

Motion is Lotion

Avoid instilling fear behaviours

Encourage extracurricular activities

Your Prescription for Health
ExeRxcise is Medicine® Canada

COMMON PROBLEMS

Osteoarthritis

Spinal Pain

Balance concerns

Cardiovascular Disease

OSTEOARTHRITIS

- ***Aerobic***

  - helps improve pain and function with max benefit achieved in supervised settings

(Tanaka et al, 2016; Li et al, 2016; Baker & McAlindon, 2000)

- ***Resistance***

  - can provide more benefit vs AT due to evidence pointing to muscle weakness as a determinant of functional ability @ 60-80% intensity also improves pain, stiffness, and function

(Tanaka et al, 2016; Li et al, 2016; Tanaka et al, 2013; Fransen et al, 2015)

OSTEOARTHRITIS

- ***Swimming***
  - may benefit knee health, reduces all-cause mortality improving endurance and CV health, may be a link with CV health and OA, benefits with depression – which can improve OA symptoms

(Lo et al, 2019)

- ***Dancing***
  - preventive significance in dance sport in the elderly.
  - Injury risk was low in competitive senior ballroom dancers

(Wanke et al, 2014)

LUMBAR SPINE

To flex or not to flex? *(Saraceni et al, 2019)*

- There was no prospective association between lumbar spine flexion when lifting and the development of significantly disabling LBP.
- Current advice to avoid lumbar flexion during lifting to reduce LBP risk is not evidence-based

LUMBAR SPINE

10 Myths about LBP *(O'Sullivan et al, 2019)*

- LBP is usually a serious medical condition
- Becomes persistent and deteriorates later in life
- Persistent LBP is always related to tissue damage
- Scans are always needed to detect the cause of LBP
- Pain w exercise and movement is always a warning that harm is being done to the spine and signal to stop or modify activity
- Is caused by poor posture when sitting, standing, lifting
- Caused by a weak core and having a strong core protects against future LBP
- Repeated spinal loading results in « wear and tear » and tissue damage
- Pain flare-ups are a sign of tissue damage and require rest
- Treatments such as strong medications, injections and surgery are effective and necessary to treat LBP

Aging and Physical Activity (Stone et al, 2018)

- Deeply embedded stereotypes/expectations
- Negative impact on self-efficacy & self perception of aging
- Leads to fear-induced activity avoidance
- Further reduction of daily fitness/function
- Increasing risk of potential harm → falls = #1

Aging and Physical Activity

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(Stone et al, 2018)

HELP PROMOTE SUCCESSFUL AGING!

Sport?

- Older individuals who are regularly active in sport generally report
  - greater happiness
  - life satisfaction
  - perceived social support
  - less likely to experience symptoms of depression and chronic disease

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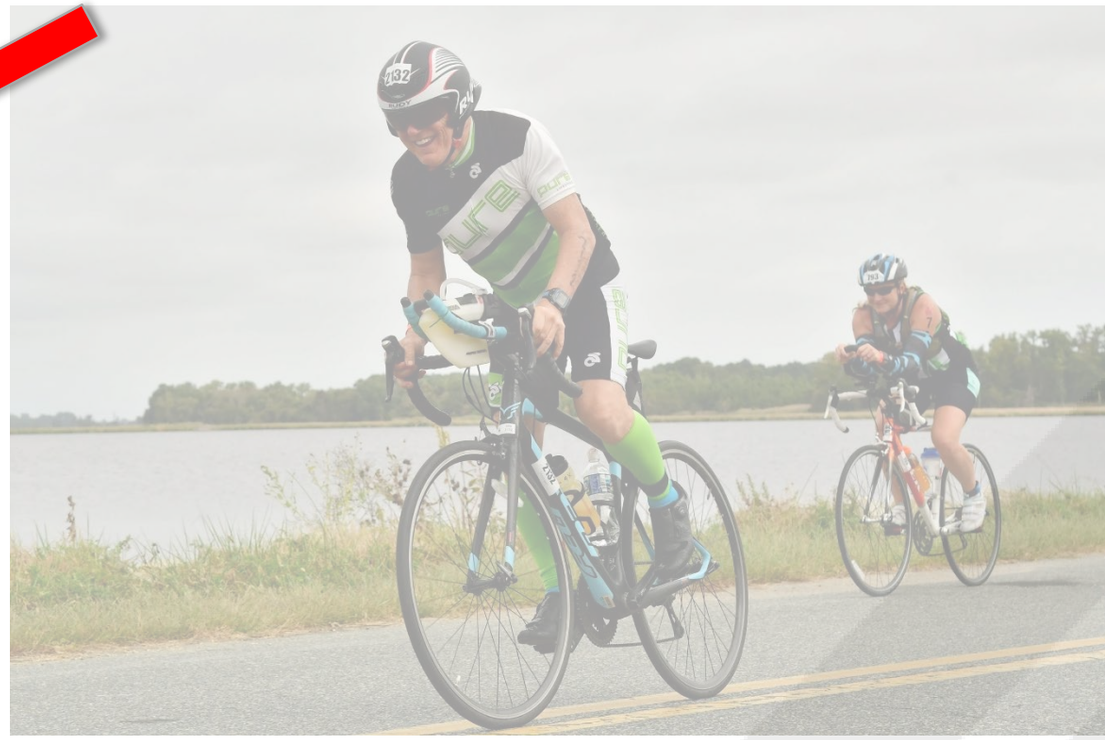
MUST BE FUN!



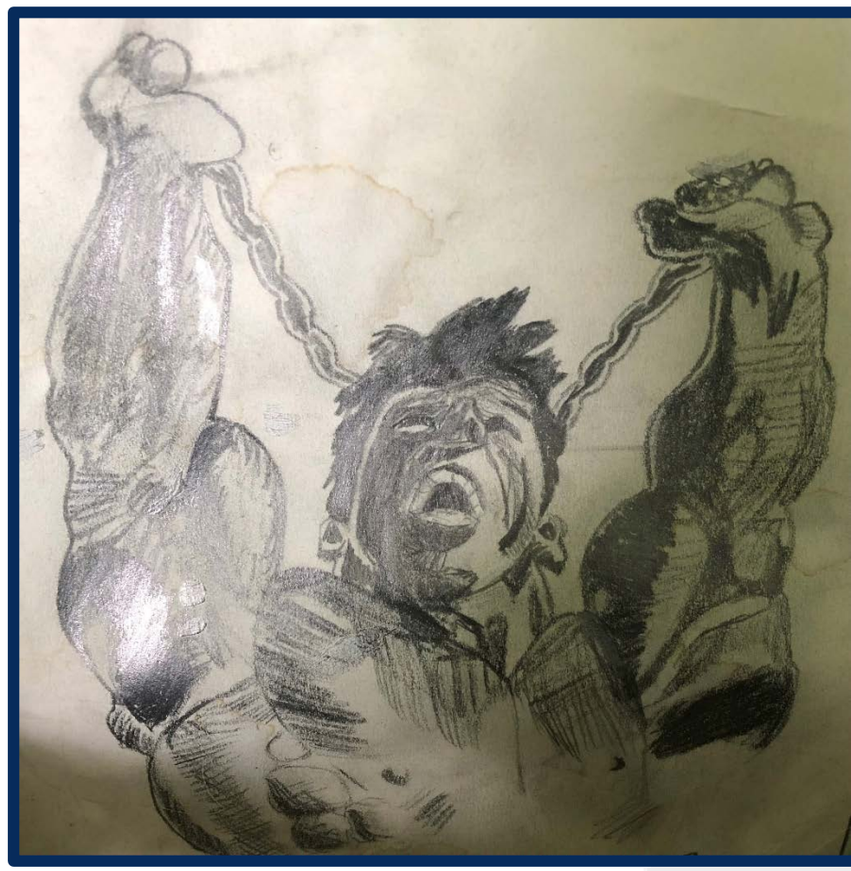
CURLING

- Curlers reported less fear of falling, more confidence in effortful coordination
- Ice Specific Movement Competency + Confidence
- Psychophysical benefits vs noncurlers

(Stone et al, 2018)

Cardiovascular Disease (CVD)

- Resistance training (RT) = contraindicated in the past, now shown to be relatively safe (Williams et al, 2007)
- RT has a lower rate of adverse cardiovascular events vs aerobic training (Hollings et al, 2017)
- RT helps increase peak work capacity, strength, decrease in CV risk factors, improve co-morbidities like sarcopenia, frailty, falls, arthritis, DM, depression, PVD, renal failure



Supported by 5 meta-analyses

(Hollings et al, 2017; Marzolini and Brooks, 2012; Yamamoto et al, 2016; Yang et al, 2015; Xanthos et al, 2017)

CVD

(informal survey, Adams et al, 2006)

ACTIVITY	FORCE POUNDS
OPENING REFRIGERATOR	9
PUSHING LAWN MOWER	36
PULLING LAWN MOWER	38
LIFTING FULL LAUNDRY BASKET	21.5
PUSHING WITH AID OF RIGHT ARM TO RISE OFF BENCH	27.5
OPENING DOOR TO CARDIAC FACILITY	15.5
LIFTING FULL COFFEE POT	6.5
LIFTING 10LB DUMBBELL	12.5
PULLING VACUUM CLEANER	8.5

SUMMARY

Motion is Lotion

Curling Saves Lives

Avoid instilling fear behaviours

Encourage extracurricular activities

Your Prescription for Health
ExeRxcise is Medicine® Canada

SUMMARY

Motion is Lotion

Curling Saves Lives

Avoid inheriting fear behaviours

Encourage extracurricular activities

Get them active!

Make it fun!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Steps Per Day

- 10,000 not based on evidence, based on marketing
- <5000/day associated with a higher prevalence of a number of adverse cardiometabolic risk factors (Schmidt et al, 2009)
- 7000-8000/day (Schmidt et al, 2009, Tudor-Locke et al, 2011)
- 150 mins/week of moderate intensity AT
  No complete sentences and certainly can't sing
- 100 steps/minute = moderate intensity walking, 30 mins/day in >10 mins – 3000 steps per day of MPA (Tudor-Locke et al, 2011, Tudor-Locke et al, 2008)
- Outdoor vs Indoor activity improved mental health (Weng and Chiang, 2014)

Mexico City metro offers 50,000 free tickets to commuters who perform ten squats in bid to tackle obesity

Drastic times call for drastic measures after Mexico is named second on the world obese list

@kirancmoodley 22 July 2015
Source: www.independent.com.uk

In Russia, 30 Squats Will Get You a Train Ticket way to promote the 2014 Sochi Olympics in Russia

https://youtu.be/ojo9M1cPSPI

Osteoarthritis – example case

- 61 yo twin females, both with +++crepitus to knees
- Mild to mod narrowing of medial fem-tib compartment, mod-severe degen changes patellofemoral articulation bilat
- Neuromuscular approach, gait re-ed (agility ladder, stairs, box work), seen 8-10 times in 1 year

Cervical Spine

- It’s ok to have a forward head posture
- Research is not compelling associating FHP and neck pain (Mahmoud et al, 2019)
- Need to move and change positions frequently