



## Equally well in mental and physical health: how can we integrate lifestyle interventions as part of routine care?

Never Stand Still

Medicine

School of Psychiatry

Simon Rosenbaum PhD

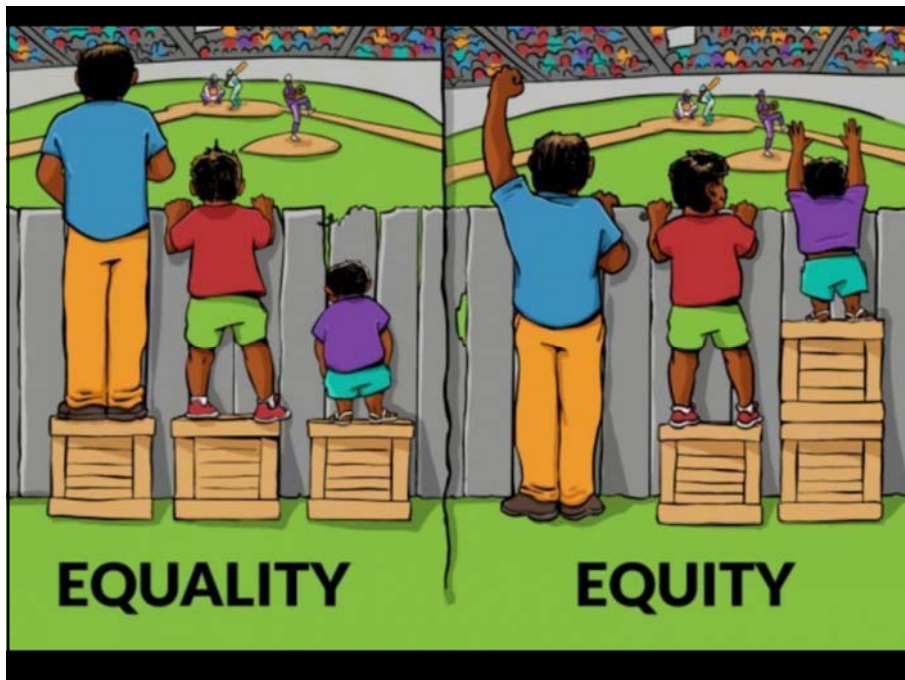
UNSW Scientia Fellow

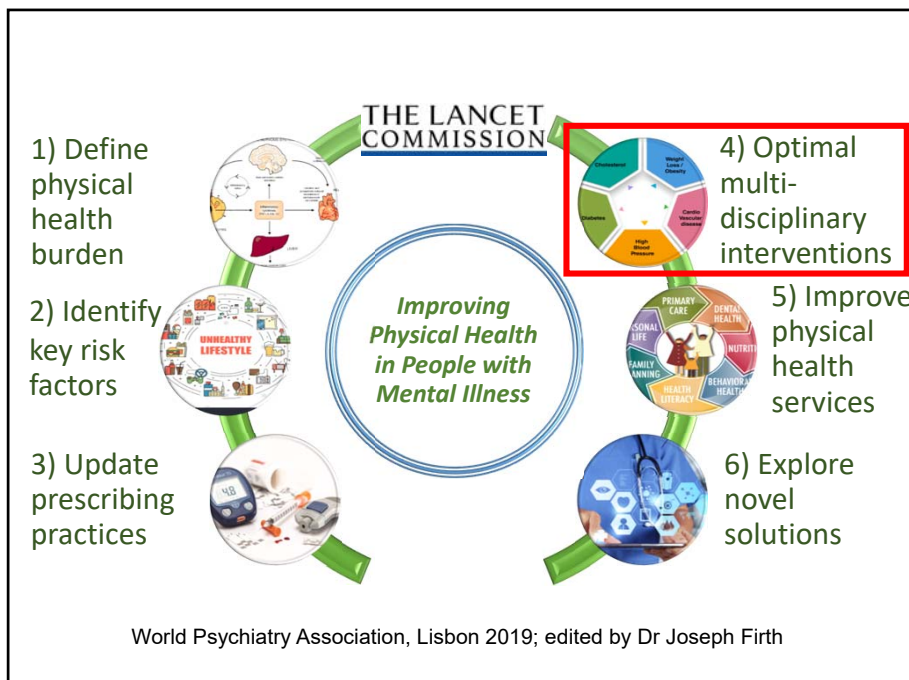
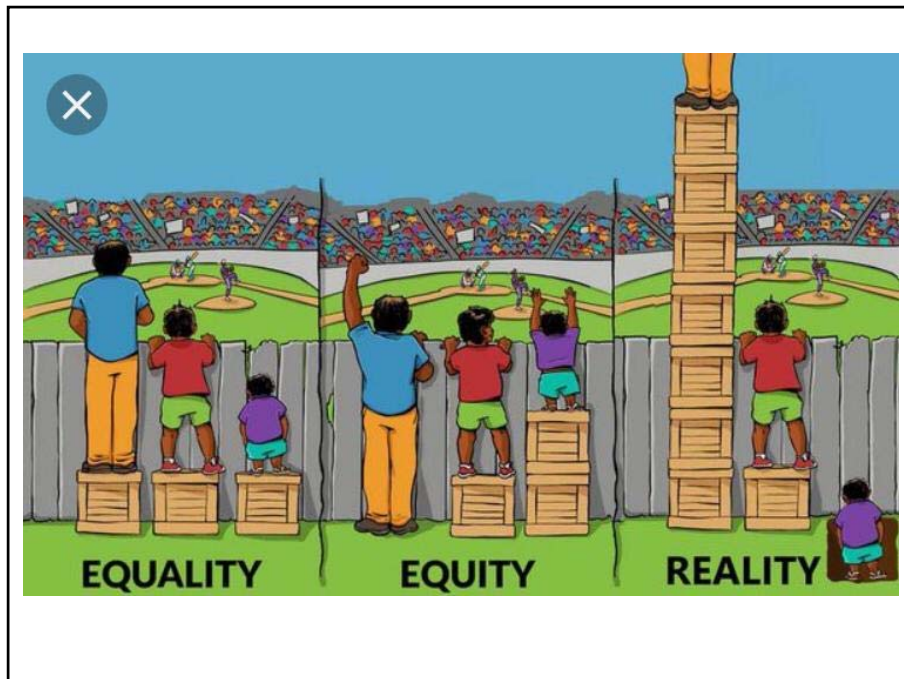
NHMRC Early Career Fellow

School of Psychiatry, UNSW

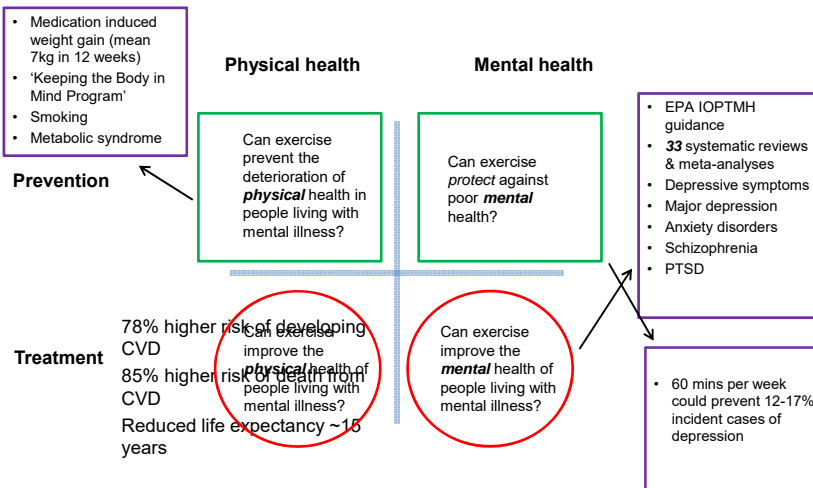
Black Dog Institute

Director, Exercise Sports Science Australia





## Progression of physical activity & MH research



Correl et al 2017 World Psychiatry; Daumit et al 2013 NEJM; Czosnek et al in 2019 MENPA; Curtis et al 2016 EIP; Schuch et al 2018 AJP; Harvey et al 2018 AJP; Stubbs et al 2018 European



## IOPTMH EPA Guidance on Physical Activity



Original article

EPA guidance on physical activity as a treatment for severe mental illness: a meta-review of the evidence and Position Statement from the European Psychiatric Association (EPA), supported by the International Organization of Physical Therapists in Mental Health (IOPTMH)

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# Management of physical health conditions in adults with severe mental disorders

## WHO GUIDELINES

Lifestyle interventions recommended for:

- Weight management
- Cardiovascular disease and risk
- Diabetes



**CBC** | MENU

**news** Exercise lowers risk of depression at all ages, researchers find

Learn more about the new look.

**Exercise lowers risk of depression at all ages, researchers find**

150 minutes of activity each week is beneficial, but doing less still has positive effects

Aminia Zafar - CBC News - Posted: Apr 24, 2018 7:59 PM ET | Last Updated: April 28

**NEWS**

Just In Politics World Business Sport Science Health Arts Analysis

**BREAKING NEWS** There will be no ban on live sheep exports to the Middle East over the northern more...

Exercise can prevent depression

Exercise can prevent depression, study finds

JRM Staff, By The Drive and Marlene Reid

Updated 2 May 2018, 5:05pm

**HEALTH • EXERCISE/FITNESS**

**Just One Hour of Exercise a Week May Help Prevent Depression**

**Exercising regularly cuts risk of depression by 16%, study suggests**

Experts say the findings must be used to urge the public to prioritise physical activity, adding, "Some is better than none."

10:26 UK  
Wednesday, 25 April 2018

**The Telegraph** HOME NEWS

**News | Science**

News - Science

**Exercising for 20 minutes-a-day cuts risk of developing depression by one third**

**RUNS BEAT BLUES** Exercising and keeping active can slash the risk of depression by a third, research claims

NHS recommends 150 minutes of exercise a week to reduce stress and inflammation, both of which are linked to depression

By Nick McDermott, Health Editor

25th April 2018, 1:38 am | Updated: 27th April 2018, 8:39 am

**NHS choices** Your health your choice

Health A-Z • Live Well • Care and support • Health topics • Services near you


Home Behind the Headlines Mental health Regular exercise may help lower your risk of depression

**Regular exercise may help lower your risk of depression**

Wednesday April 25 2018

Schuch et al 2018 American Journal Psychiatry; Harvey et al 2017 American Journal Psychiatry





ABC.NET.AU  
New study offers 'strongest evidence' yet that exercise helps prevent depression

Walton Ng, Chrissy Le Breton and 1.9K others · 161 Comments · 616 shares

Like · Comment · Share

ABC News's post

9 h · Like · Reply

Reply

Alright, my point is some exercise may help reduce the risk of depression due to some causes, but not all. Exercise is good for your health for other reasons as well.

12 h · Like · Reply

new study find people that are able to leave the house, can manage to get dressed, manage to eat, find that exercise helps their depression.

2 h · Like · Reply

I'll have to work up to vigorous. At nearly 55 I'd probably have a heart attack


42 m · Like · Reply

Write a comment...

IONS · HOME · SEARCH

# How Exercis

**Phys Ed**  
By GRETCHEN REYNOLDS · NOV. 16, 2016



226 COMMENTS

[Click here](#) to read the best Times comments from the past week.

Share your thoughts.

All 226 · Readers' Picks 164

**Tom** · Missouri · November 17, 2016  
If I start exercising regularly, will Donald Trump go away? Because otherwise I think my depression will last for the next four years.

Reply · 234 Recommend · Flag

**Leslie** · Long Island · November 17, 2016  
Often a hallmark of depression is to be unable to get up and go in the first place, so while exercise is a wonderful antidote, it is quite difficult to implement for many.

Reply · 144 Recommend

**Independent Voter** · Los Angeles · November 17, 2016  
I've struggled with severe depression since my late teens and have been on various medications on and off for decades. I have found that the ONLY thing that consistently alleviates it is going to the gym and working out for an hour or two. It's quite amazing how the depression lifts. It may not go away entirely, but it certainly lessens and makes the day more bearable.

Reply · 114 Recommend





thatgirlwithBPD   
@thatgirlwithbpd

Follow



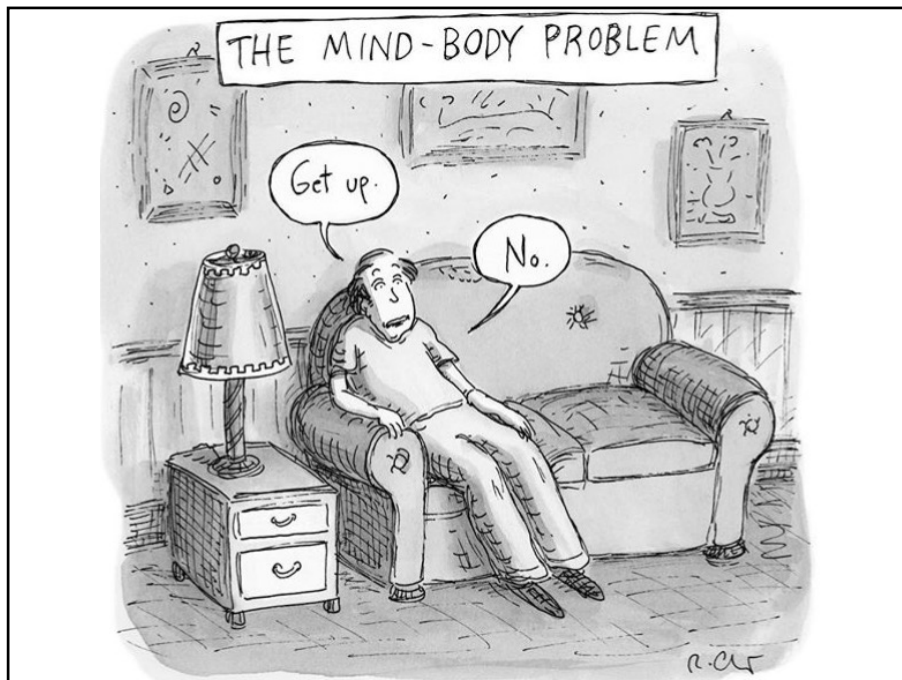
Sick of people who don't have a mental illness saying that I should exercise to help my mood. 90% of the time I don't even have the energy to shower or make food so how the fuck am I gonna exercise. Just shut up

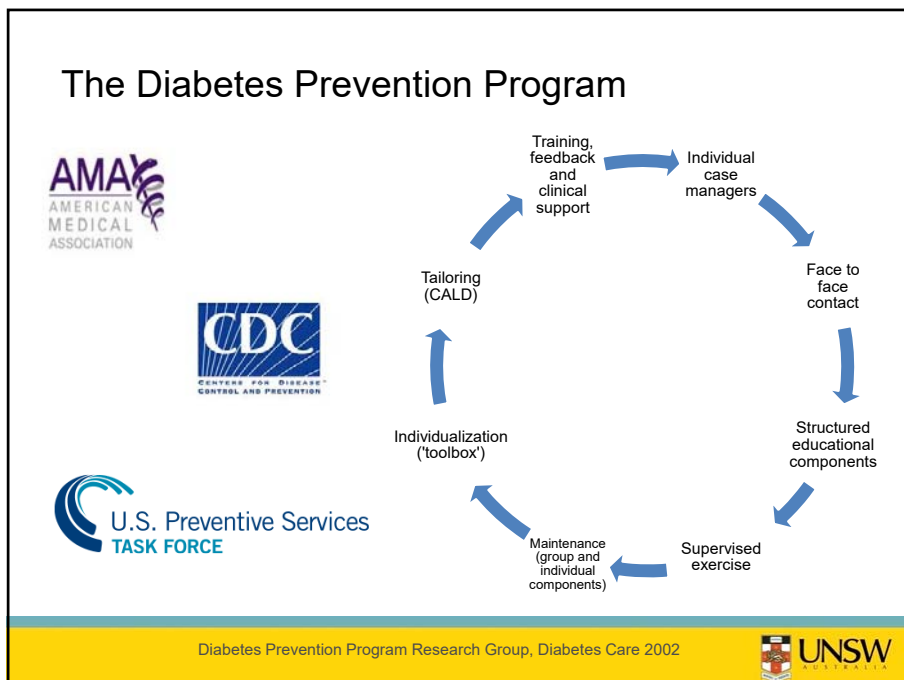
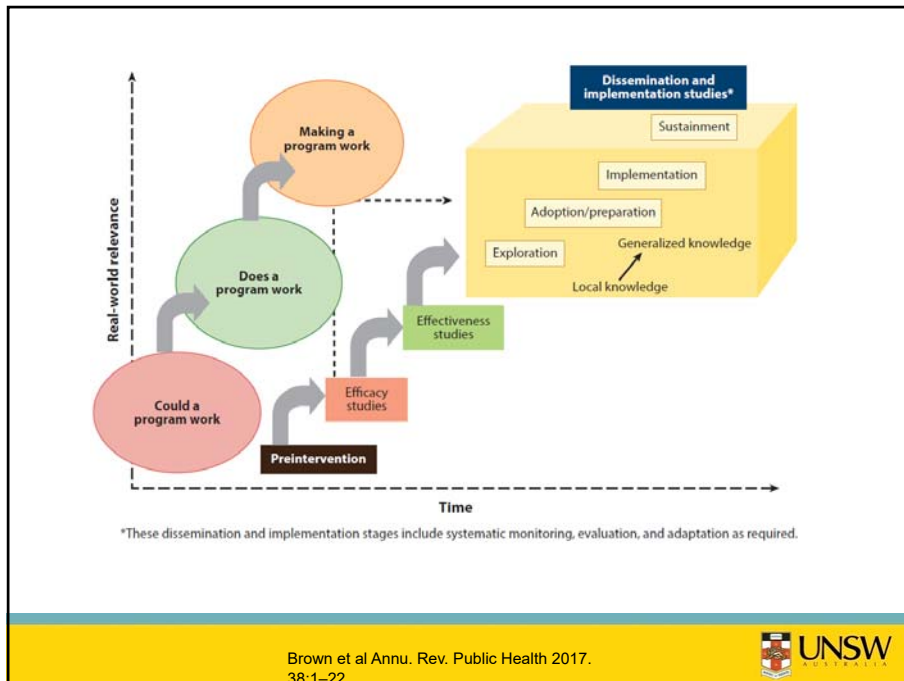
9:13 AM - 2 Jul 2018

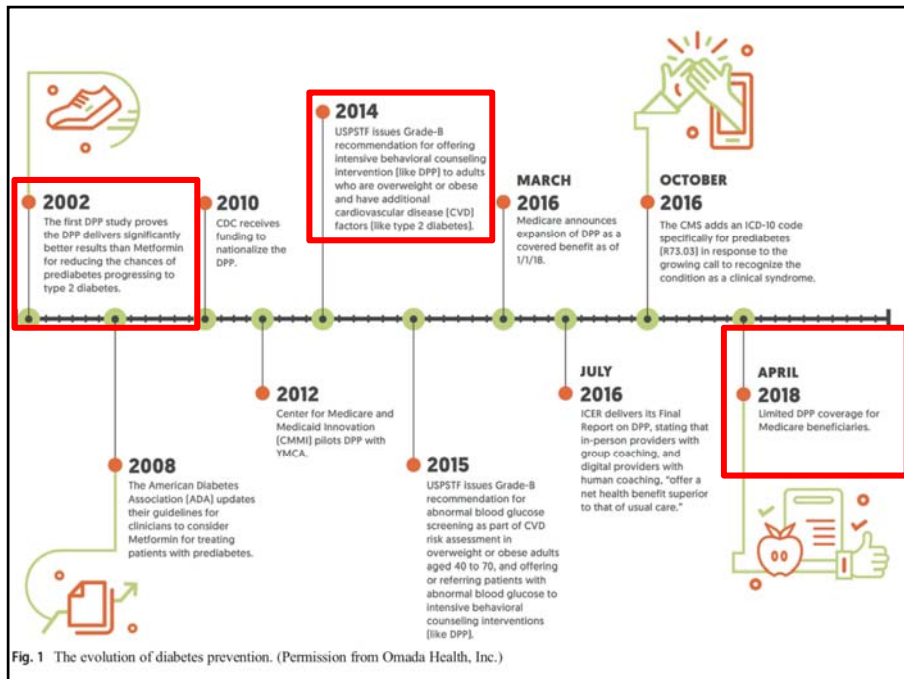
3,743 Retweets 15,206 Likes



145 3.7K 15K





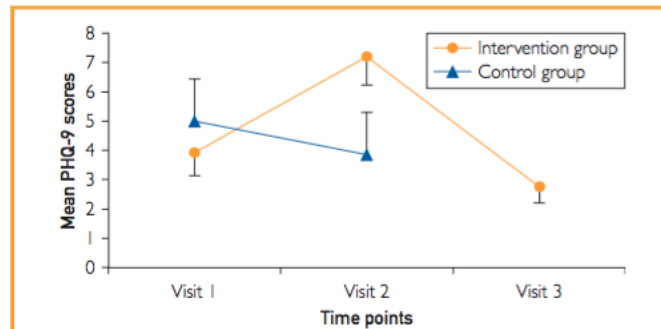


## How does the existing research stack up?

	Included both exercise & diet?	Used specified BCTs	Delivered by staff with professional qualifications in exercise or dietetics	Offered $\geq 2$ supervised exercise sessions per week	Mental health staff trained	Peer-support
IMPACT	Yes	No	No	No	Yes	No
CHANGE	Yes	Yes	Yes	No	No	No
INTERACT	Yes	No	No	No	Yes	No
In SHAPE	Yes	Yes	Yes	Yes	No	No
ACHIEVE	Yes	Yes	No	No	Yes	No
CAPICOR	Yes	Yes	No	Yes	Yes	No
KBIM	Yes	Yes	Yes	Yes	Yes	Yes



What happens when we make healthy people inactive for one week?

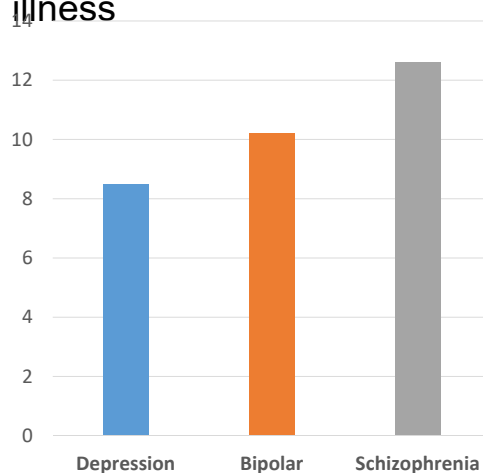


**FIGURE 3.** Composite PHQ-9 scores over time for intervention group vs control group. Standard errors are included as the error bars. PHQ-9 = Patient Health Questionnaire-9.

Edwards & Loprinzi 2016 Mayo Clinic Proceedings



## Sedentary time in people living with mental illness

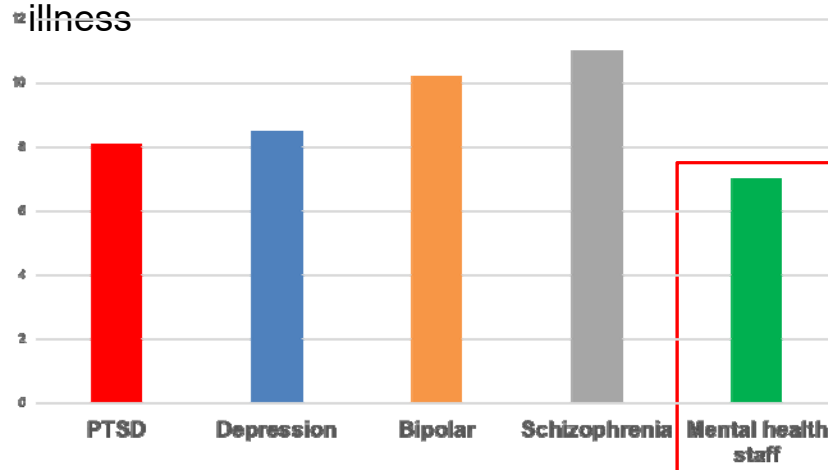


- Meta-analysis of 69 individual studies (n=35,682)
- Average 7.9 hours sedentary per day
- More sedentary than age and gender matched healthy controls
- Less likely to meet PA guidelines (OR 1.5)
- Inpatients more active vs community/outpatients

Stubbs et al Schiz Res 2016; Stubbs, Williams et al Schiz Res 2016; Vancampfort et al 2016 JAD; Schuch et al JAD 2017; Vancampfort et al 2017 World Psy



## Sedentary time in people living with mental illness



Chen et al in preparation; Vancampfort et al 2017 World Psy



## Keeping Our Staff in Mind (KoSIM)

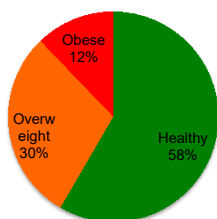


Rosenbaum et al 2019 under review



## How do our staff measure up?

**Baseline Body Mass Index**



Waist (cm)	Mean	SD
Pre	88.3	13.1
Follow-up	86.2	12.8
<b>Change</b>	<b>-2.2**</b>	<b>2.7</b>

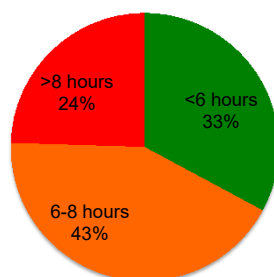
Among participants overweight or obese at baseline, **mean weight loss of 1.2kg (p<0.05)**

*'My motivation to look after my health really increased'*

*'(Participating in KoSiM) was a very positive experience. It got me setting health goals, being more active and eating better'*

## Sedentary behaviour

Baseline sedentary time /day



- Baseline: 8 hours 57mins
- Follow-up: 7 hours 42mins
- **Decrease: 1 hours 15mins\*\***
- *'I realised that it (KoSiM) made me more aware of how sedentary I was, especially during work hours so I started walking home from work'*
- 95% of participants said they planned to pay more attention to increasing PA

## Previous exposure to exercise physiologist or dietitian

- 10%: referred to or seen a dietitian
- 7%: referred to or seen an exercise physiologist



At follow-up:

- **95%** and **93%** reported a better understanding of the role of dietitians / EPs



## Changing culture and practice



JOURNAL OF MENTAL HEALTH  
<https://doi.org/10.1080/09638237.2018.1521995>



ORIGINAL ARTICLE

**Self-reported physical activity levels of the 2017 Royal Australian and New Zealand College of Psychiatrists (RANZCP) conference delegates and their exercise referral practices**

Hamish Fibbins<sup>a,b</sup>, Louise Czosnek<sup>c,d</sup>, Robert Stanton<sup>e</sup>, Kade Davison<sup>f</sup>, Oscar Lederman<sup>g,h</sup>, Rachel Morell<sup>h,b</sup>, Philip Ward<sup>b,h</sup> and Simon Rosenbaum<sup>b,i</sup>



## International Position Statement: The Role Of Physical Activity In Closing The Life Expectancy Gap of People With Mental Illness

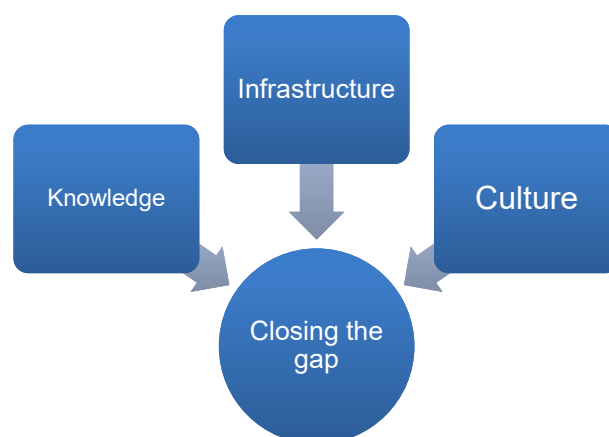
The below organisations are committed to working towards a global strategy to **achieve a 50% reduction in the life expectancy gap of people experiencing mental illness by 2032**



Rosenbaum et al., 2018. *Translational Journal of the American College of Sports Medicine*



## Integrating exercise as a routine component of care



Rosenbaum et al., 2018. *Translational Journal of the American College of Sports Medicine*



## Exercise & mental health: moving beyond weight

- Change in symptoms occur independent of changes in body mass = **cannot measure success of exercise through weight loss**



THE CONVERSATION



## Fitness vs. Fatness

- **1 in 210** obese men & **1 in 124** obese women will achieve normal weight without surgery
- Among those who manage to lose significant weight (at least 5% of bodyweight), **at least half** will regain it within two years
- Yet, among people with SMI - weight loss most common motivating factor to start exercise (83%)<sup>2</sup>



Fildes et al 2015 Am J Public Health; Firth et al 2016 Psy Med<sup>2</sup>

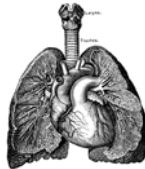




## Fitness vs. Fatness



Low CRF is a strong and independent predictor of CVD & all-cause mortality<sup>1</sup>



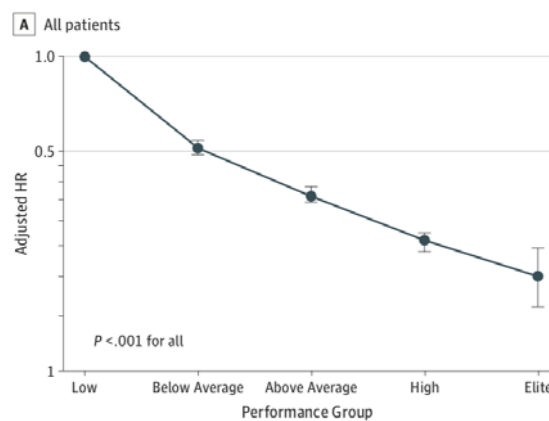
SMI = ↓ CRF of -8.96 mL/kg/min vs. controls ( $g = -1.01$ )<sup>2</sup>

Modest incremental increases in CRF of 3.5 mL/kg/min associated with 13% and 15% decrements in risk of all-cause and CVD mortality respectively<sup>1</sup>



Kodoma et al 2009<sup>1</sup>; Vancampfort et al 2016 Sports Med<sup>2</sup>

Figure 2. Risk-Adjusted All-Cause Mortality



Mandsager et al 2018 JAMA Network Open



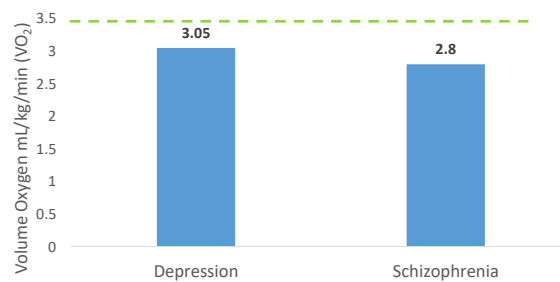
## Fitness vs. Fatness



Among SMI population<sup>1</sup>:

- Negative symptoms, BMI & female = ↓CRF
- First episode and inpatient status = ↑CRF

Improvements in fitness following average 12-week exercise interventions<sup>2,3</sup>



Health  
South Eastern Sydney  
Local Health District



Vancampfort et al 2016 Sports Med<sup>1</sup>; Vancampfort et al 2015 Acta Psych Scan<sup>2</sup>;  
Vancampfort et al 2015 Schiz Res<sup>3</sup>; Stubbs et al 2015 JAD<sup>4</sup>

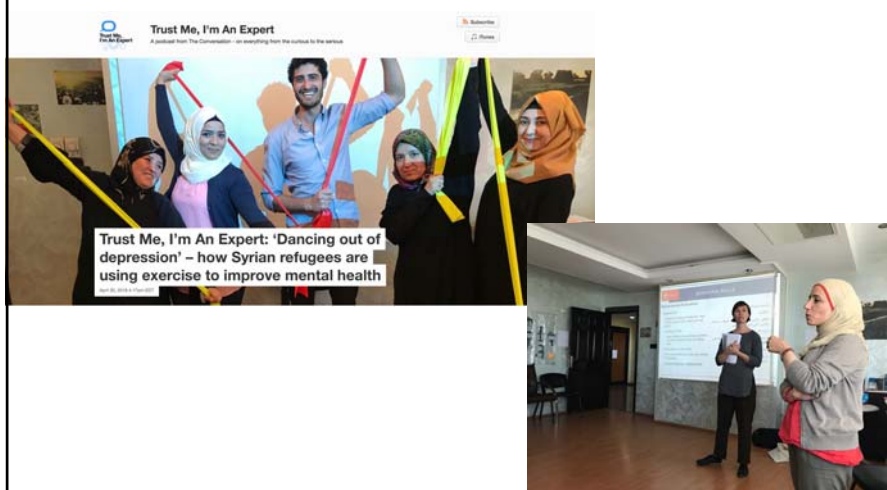


"Refusing to go to the gym is not the same thing as resistance training."

Gordon et al 2017 Sports Medicine (anxiety); Gordon et al 2018 JAMA Psychiatry (depression)



## Syrian Refugees in Turkey: *The Conversation*



<https://theconversation.com/trust-me-im-an-expert-dancing-out-of-depression-how-syrian-refugees-are-using-exercise-to-improve-mental-health-94412>



## Kutupalong camp, Cox's Bazar Bangladesh



## MindFresh: a sport and physical activity for mental health program in Bangladesh



<https://alumni.unsw.edu.au/giving/MindFresh>



#EndPJparalysis

**NHS**  
South Tees Hospitals  
NHS Foundation Trust

We want  
our patients to  
**Get up  
Get dressed  
& Get moving**  
whenever they possibly can.

Research shows that this can  
improve health and shorten the  
length of time spent in hospital.  
Older adults can quickly lose  
mobility and ability to do everyday  
tasks such as bathing and dressing.

**5%**  
of muscle strength can be  
lost in older adults for  
every day spent in hospital

If you're visiting a relative  
please help by bringing  
the following items

- Day clothes
- Well fitting shoes or slippers
- Glasses or mobility aids



#EndPJparalysis

Get dressed to feel your best!



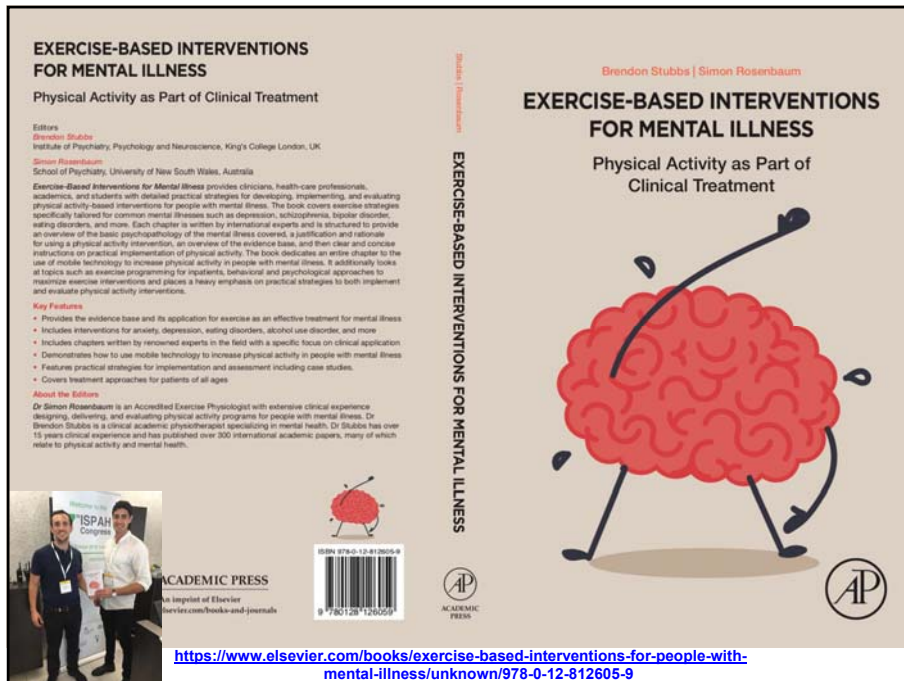
WHO Global Action Plan on Physical Activity

#MovementforMovement


Four-week free MOOC hosted by People's Uni started Novem

<https://ooc.peoples-uni.org/course/index.php?categoryid=18>





## Simple Physical Activity Questionnaire (SIMPAQ)



**Introduction:** I am going to ask you about what you have been doing over the **past seven days**, including time spent in bed, sitting or lying down, walking, exercise, sport and other activities.

**1A.** What time did you mostly go to bed over the past seven days?  
Prompt: between \_\_\_\_ and \_\_\_\_ pm?  
Answer: \_\_\_\_ am/pm

**1B.** What time did you mostly get out of bed over the past seven days?  
Answer: \_\_\_\_ am/pm

**2A.** That leaves approximately \_\_\_\_ hours a day out of bed. Out of those \_\_\_\_ hours, how long did you spend sitting or lying down, such as when you are eating, reading, watching TV or using electronic devices? Prompt: e.g. sitting at work, transport, leisure time or at home.  
Answer: \_\_\_\_ Hours \_\_\_\_ minutes / day

**2B.** How much of this time is spent napping?  
Answer: \_\_\_\_ Hours \_\_\_\_ minutes / day

**3.** That leaves approximately \_\_\_\_ hour a day for other activities. Which days in the past seven days did you walk for exercise or recreation or to get to or from places? How many minutes did you usually spend walking on those days?

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

**4A.** Now think about any activity that you do for exercise and sport, such as jogging, running, swimming, bike riding, going to the gym, yoga, \_\_\_\_ (e.g. 30 or \_\_\_\_ (e.g. 20 min manuals). Which days in the past week did you do any of these, or similar activities?

**4B.** What activities did you do and how much time did you spend on each activity on each day?

e.g.	Activity and intensity (B 10)	Number of sessions	Minutes	Total
Monday	Resistance training (B 10), tennis (B 10)	3, 1	15, 50	65
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				
Total				

**5.** Now think about any other physical activities that you did as part of your work, or activities you did while at home such as gardening or household chores. How many minutes did you spend on these activities on most days? Prompt: this does not include walking, sport or exercise.  
Answer: \_\_\_\_ minutes / day

**3A. Average hours in bed per night:**


**3B. Average hours sedentary per day:**

**3C. Average hours walking per day:**

**4. Average hours sport / exercise per day:**

**5. Average hours other activities per day:**

[www.simpag.org](http://www.simpag.org)



## SIMPAQ Languages



- French: Questionnaire sur l'activité physique
- Czech: Jednoduchý dotazník fyzické aktivity
- Finnish: Kysely fyysisestä aktiivisuudesta
- Farsi: پرسشنامه فعالیت‌های ساده ی جسمی (سیمپک)
- Japanese: 身体活動簡易質問票
- Portuguese:
- Spanish: Cuestionario sencillo de actividad física
- Swedish: Enkelt frågeformulär om fysisk aktivitet ('SIMPAQ')
- Mandarin: 簡易體能活動問卷調查
- Luganda: Engeli Enyangu Mukukozesa Omubiri era N'ebibuzo



## Questions I can ask today?

### Clinicians and practitioners

- Can I ask people I care for about exercise, diet, smoking and lifestyle?
  - 'Make Every Contact Count'
- Can I refer to local health professionals e.g. dietitians and exercise physiologists?

### Researchers

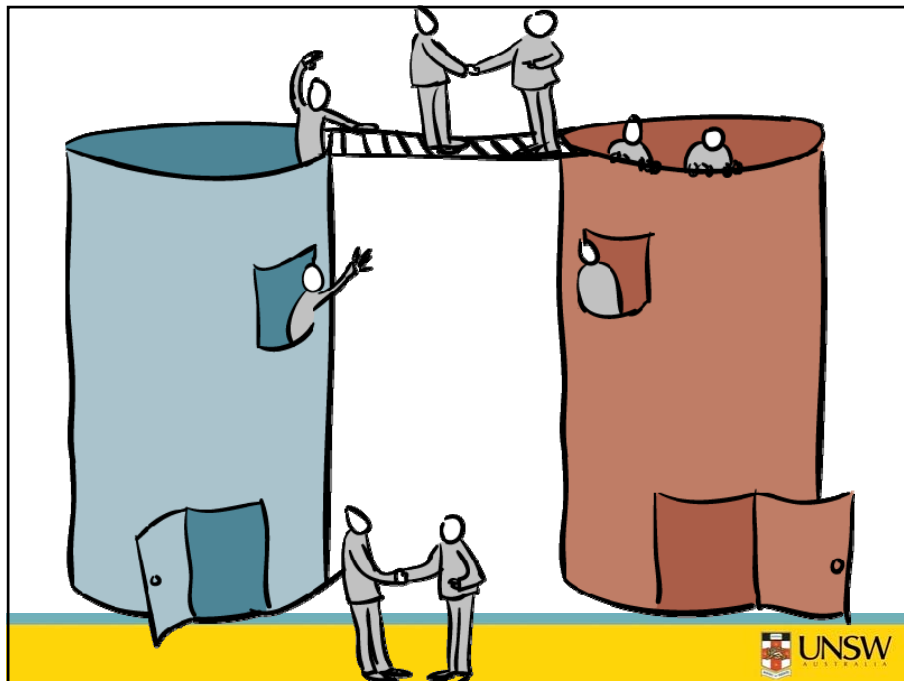
- How can we adapt and scale established, evidenced-based programs to local contexts?
- Can we collaborate with implementation scientists and health economists to think beyond RCTs?

### Policy and decision makers

- Is the culture right for change? Are staff on board or 'old-school'?
- What resources are available to adequately support implementation?







## Acknowledgements

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