Introducing "Lifestyle Psychiatry":

Principles, Evidence & Implementation of Health Behaviours in Mental Healthcare

Dr. Joseph Firth, University of Manchester, U.K.

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DECLARATION OF INTERESTS

- **Internal Funding:**

  University of Manchester Presidential Fellowship

- **External Funding:**

  Blackmores-NICM Research Fellowship

  UK Research & Innovation Future Leaders Fellowship

- **Consultancy and Honoraria:**

  Atheneum, ParachuteBH, Richmond Foundation, Nirakara, VitaFoods & BANT

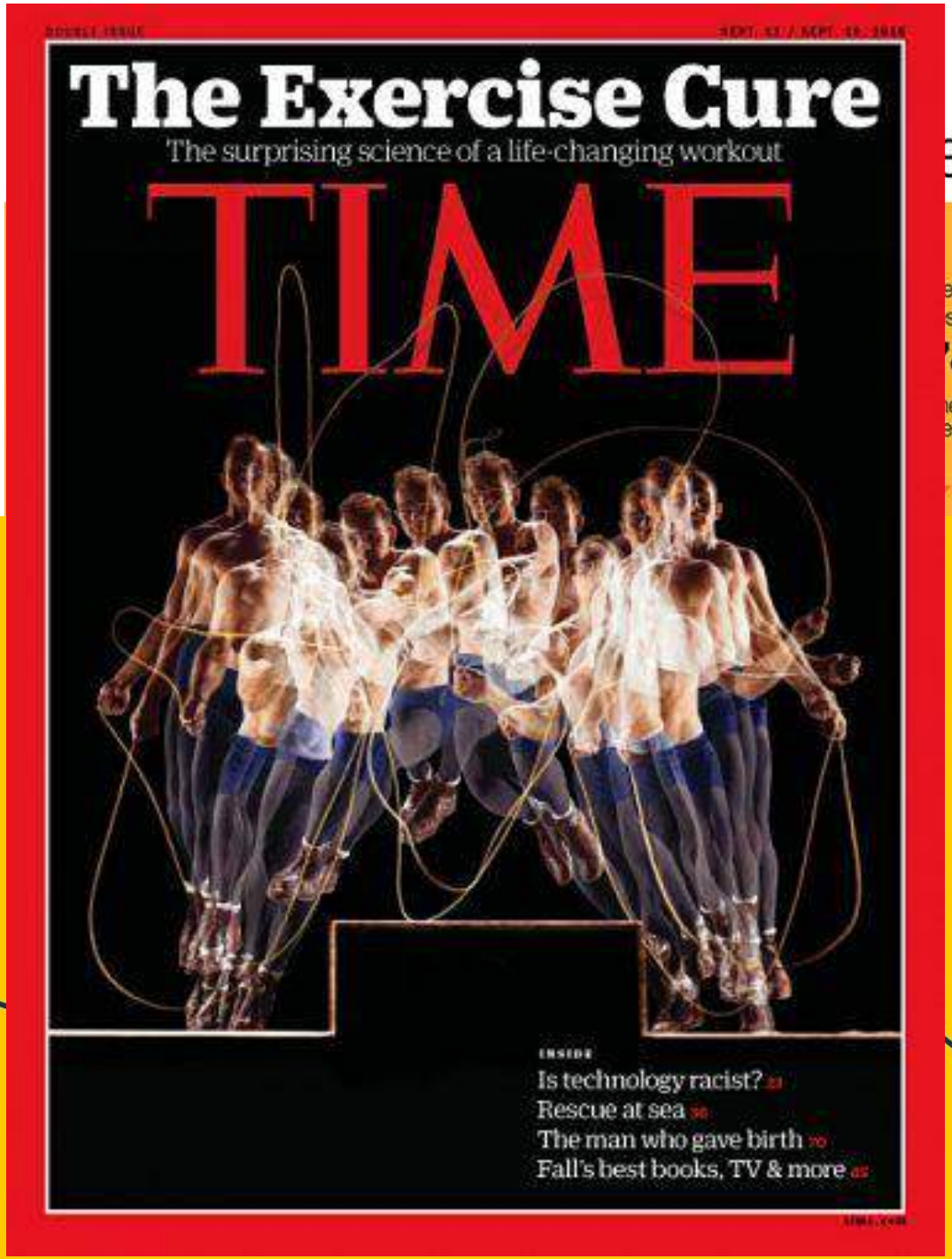
- **Affiliations**

  UKRI Future Leaders Fellow, University of Manchester

  Honorary Research Fellow, Western Sydney University

  Honorary Research Fellow, Greater Manchester Mental Health NHS Trust

Dr. Joseph Firth



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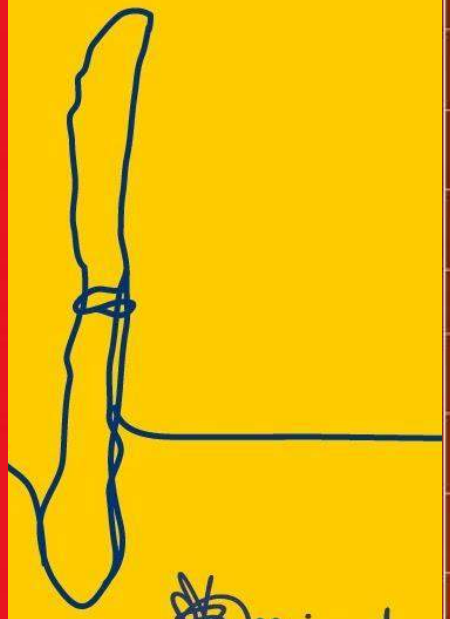
People who participate in sports clubs and organised recreational activity enjoy better mental health.



12 MENTAL BENEFITS of EXERCISE

>>EXERCISE WILL MAKE YOU FEEL BETTER!
Exercising releases endorphins, making you feel happy and positive about yourself. Don't we all want that?

>>OVERALL MOOD BOOSTER!
Exercising regularly will release tension. This translates into solved problems with depression and stress.

>>CONFIDENCE.
When you exercise and relieve that tension while taking care of yourself, you can't help but be proud of your accomplishments. You feel like a brand new you, and you know you look good.

>>IT HELPS YOUR BODY TO HAVE A HIGH PAIN TOLERANCE.
Exercise can make you sore sometimes. At first it might be horrible, but after it happens a few times you learn how to deal with it. This leads to an overall increase in your pain threshold.

>>WORK TO IMPROVE YOUR BRAIN POWER!
Exercise causes your body to create more brain cells and connections. This means your brain becomes more powerful and has a greater capacity for learning.

>>EXERCISE IMPROVES YOUR CHARACTER.
Sticking to an exercise routine will help you to develop the qualities of discipline, dedication, and determination.

>>SELF DISCIPLINE.
It also helps you develop the skills of compliance and adherence. These skills will have a positive effect in all areas of your life.

>>EXERCISE CAN HELP WITH ADDICTION RECOVERY.
As mentioned before, exercise can help you to develop discipline. Overcoming addictions can become a lot easier when a workout routine is in place.

>>IT ALSO HELPS COMBAT DEPRESSION.
Depression is caused by a chemical imbalance in the brain. Exercise induces "happy chemicals" to be produced more abundantly.

>>FITNESS REDUCES ANXIETY.
Using your energy in an effective way helps you to relax better.

>>EVER HEARD OF "RUNNER'S HIGH?"
That's right! Vigorous exercise can make you feel great.

>>CONCENTRATION.
Exercise can boost your concentration and mental awareness.

World Psychiatry

OFFICIAL JOURNAL OF THE WORLD PSYCHIATRIC ASSOCIATION (WPA)

Volume 19, Number 3 *October 2020*

World Psychiatry

A meta-review of "lifestyle psychiatry": the role of exercise, smoking, diet and sleep in the prevention and treatment of mental disorders

Joseph Firth[1,2], Marco Solmi[3], Robyn E. Wootton[4], Davy Vancampfort[5,6], Felipe B. Schuch[7], Erin Hoare[8], Simon Gilbody[9], John Torous Scott B. Teasdale[11], Sarah E. Jackson[12], Lee Smith[13], Melissa Eaton[2], Felice N. Jacka[14], Nicola Veronese[15], Wolfgang Marx[14], Garcia Ashdown-Franks[16-18], Dan Siskind[19,20], Jerome Sarris[2,21], Simon Rosenbaum[11], André F. Carvalho[22,23], Brendon Stubbs[17,18]

Methods:

Results from **29 meta-analyses of prospective/cohort studies, 12 Mendelian randomization** studies, **2 meta-reviews**, and **2 meta-analyses of RCTs** were synthesized to generate overviews of the evidence for targeting each of the specific lifestyle factors in the prevention and treatment of **depression, anxiety and stress-related disorders, schizophrenia, bipolar disorder, and attention-deficit/hyperactivity disorder**.

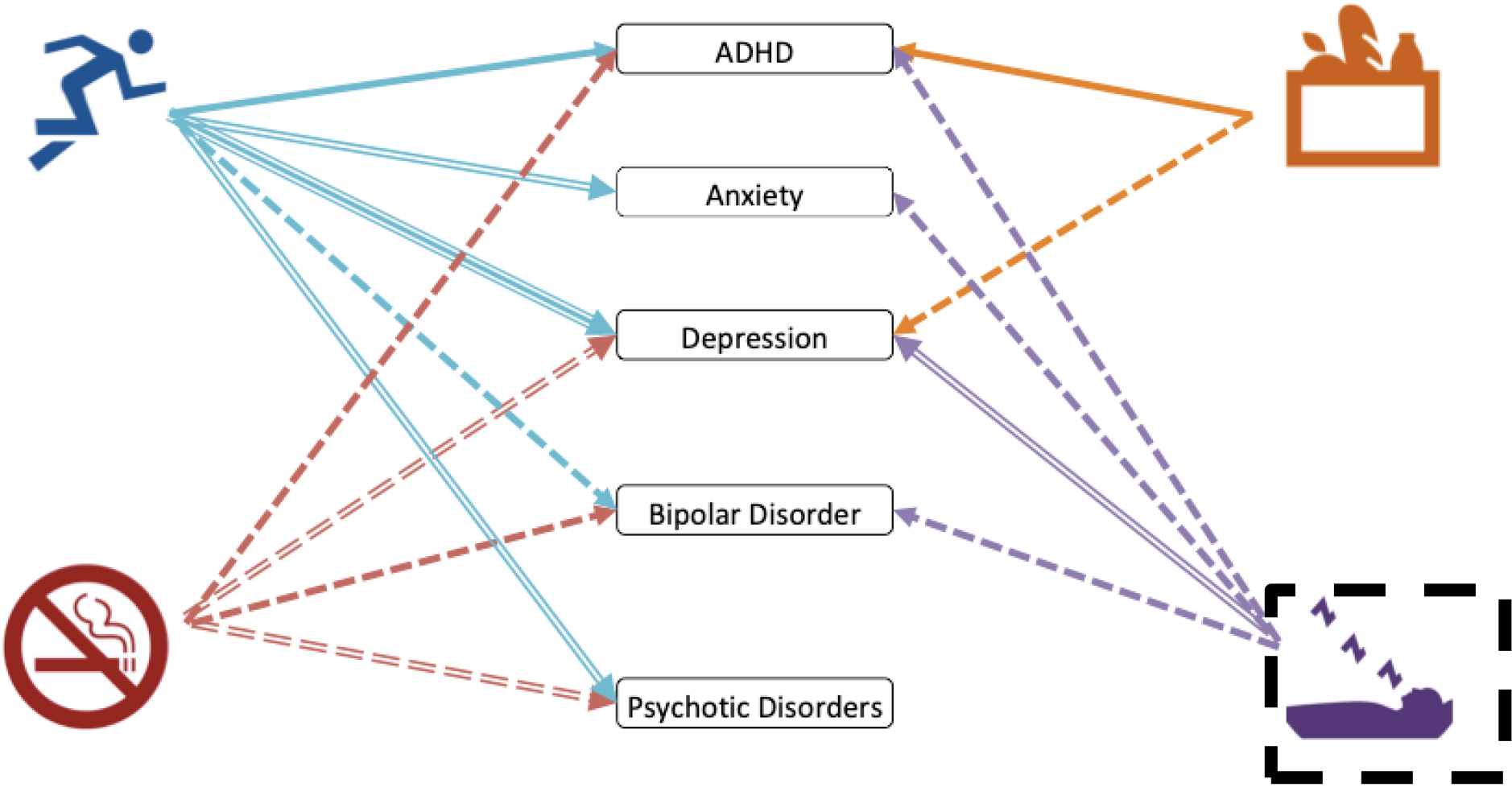
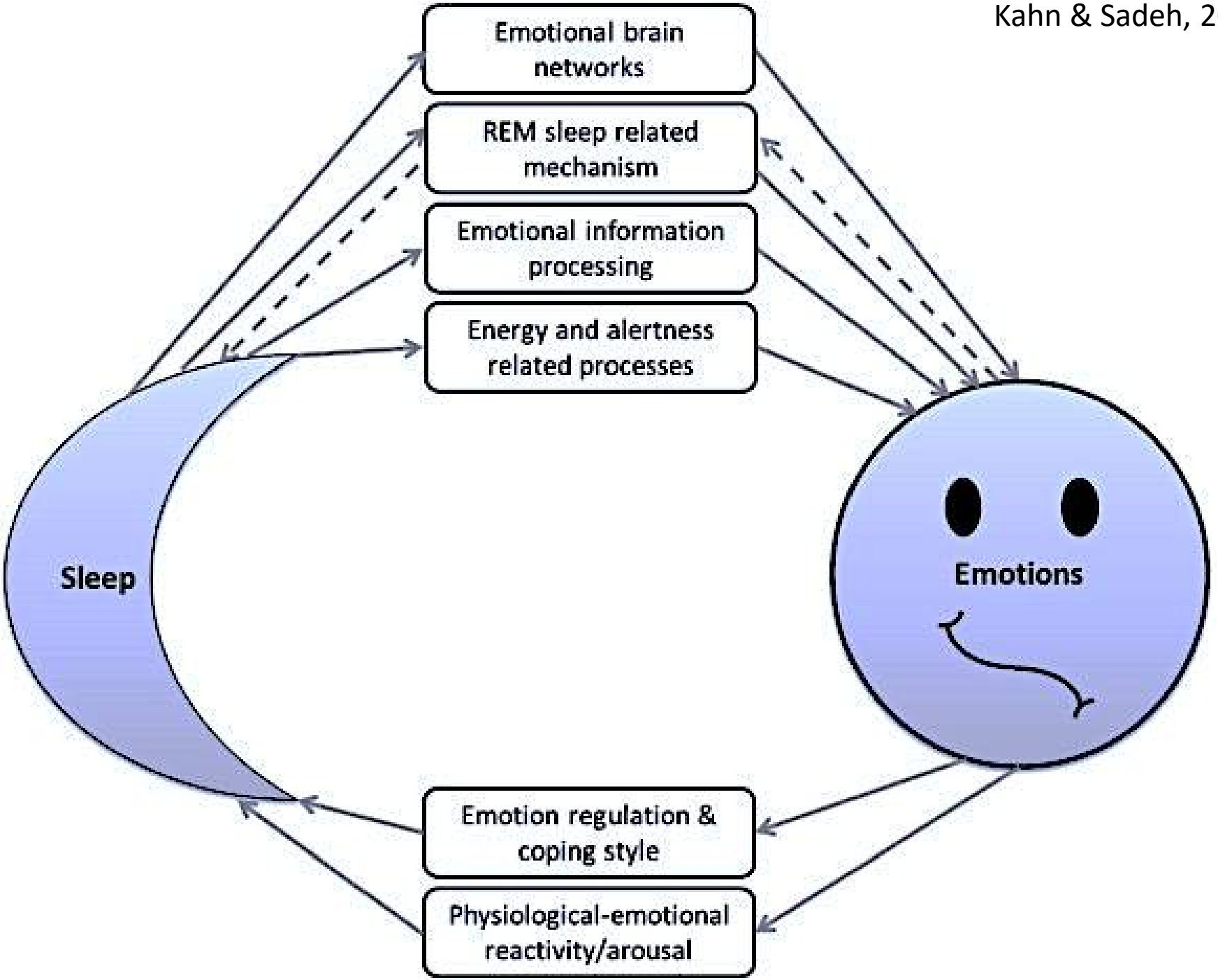
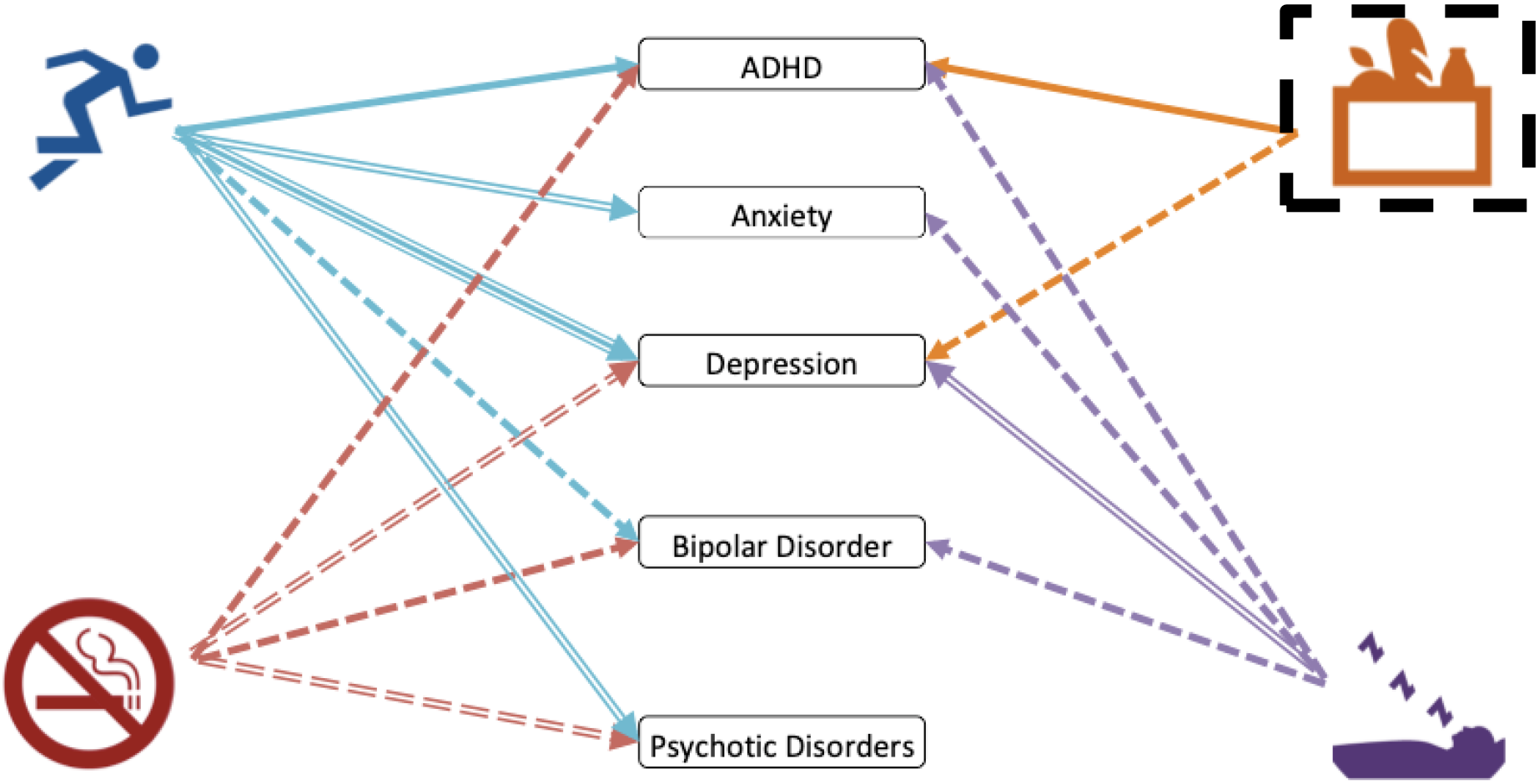


Figure 1. Lifestyle factors in the prevention and treatment of mental illness. The dashed line indicates evidence for protective benefit from either prospective meta-analyses (P-MAs) or Mendelian randomization studies (MRs). The double-dashed line indicates evidence for protective effects from both P-MAs and MRs. The solid line indicates evidence for efficacy in treatment of mental illness from MAs of randomized controlled trials (RCTs). The double solid line indicates convergent evidence from MRs or P-MAs with MAs of RCTs. The treble solid line indicates convergent evidence from all three (P-MAs + MRs + MAs of RCTs). ADHD – attention-deficit/hyperactivity disorder.

Kahn & Sadeh, 2013





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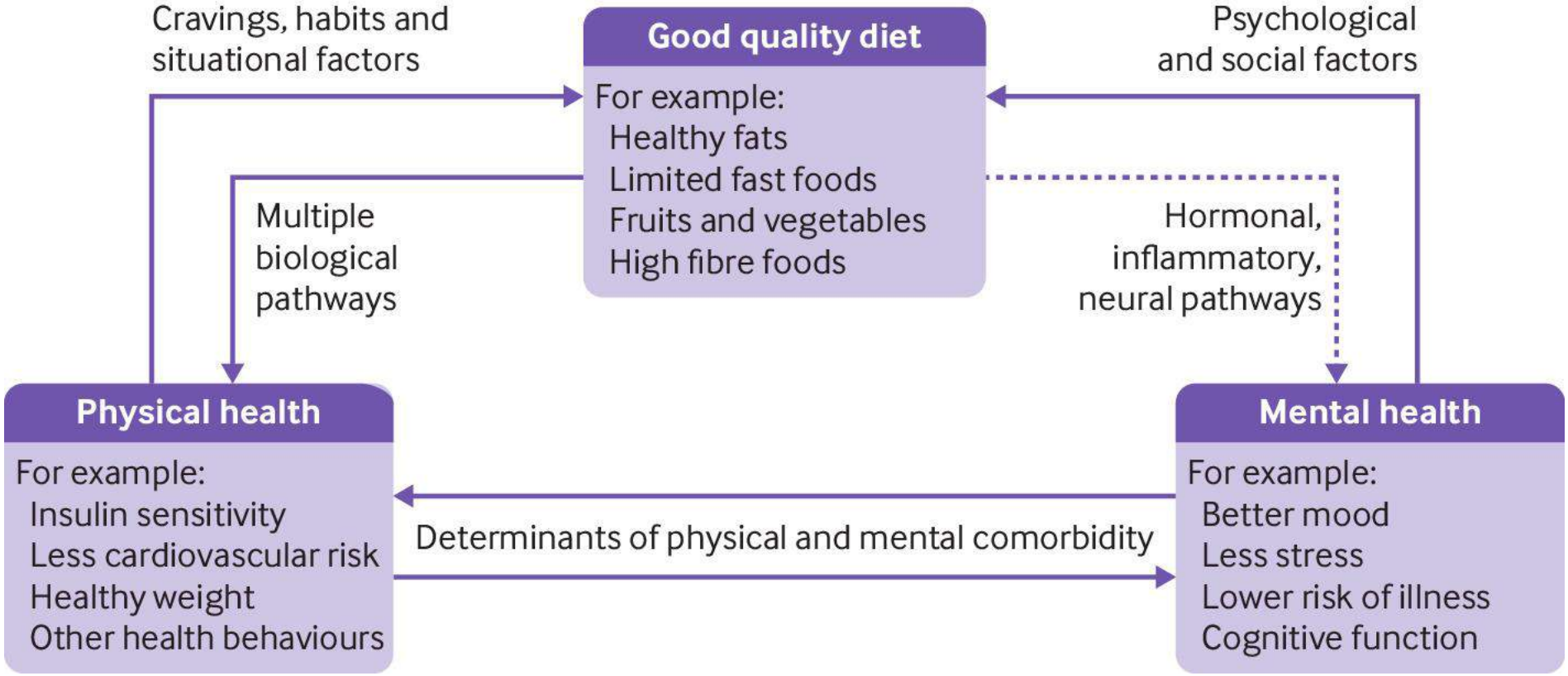
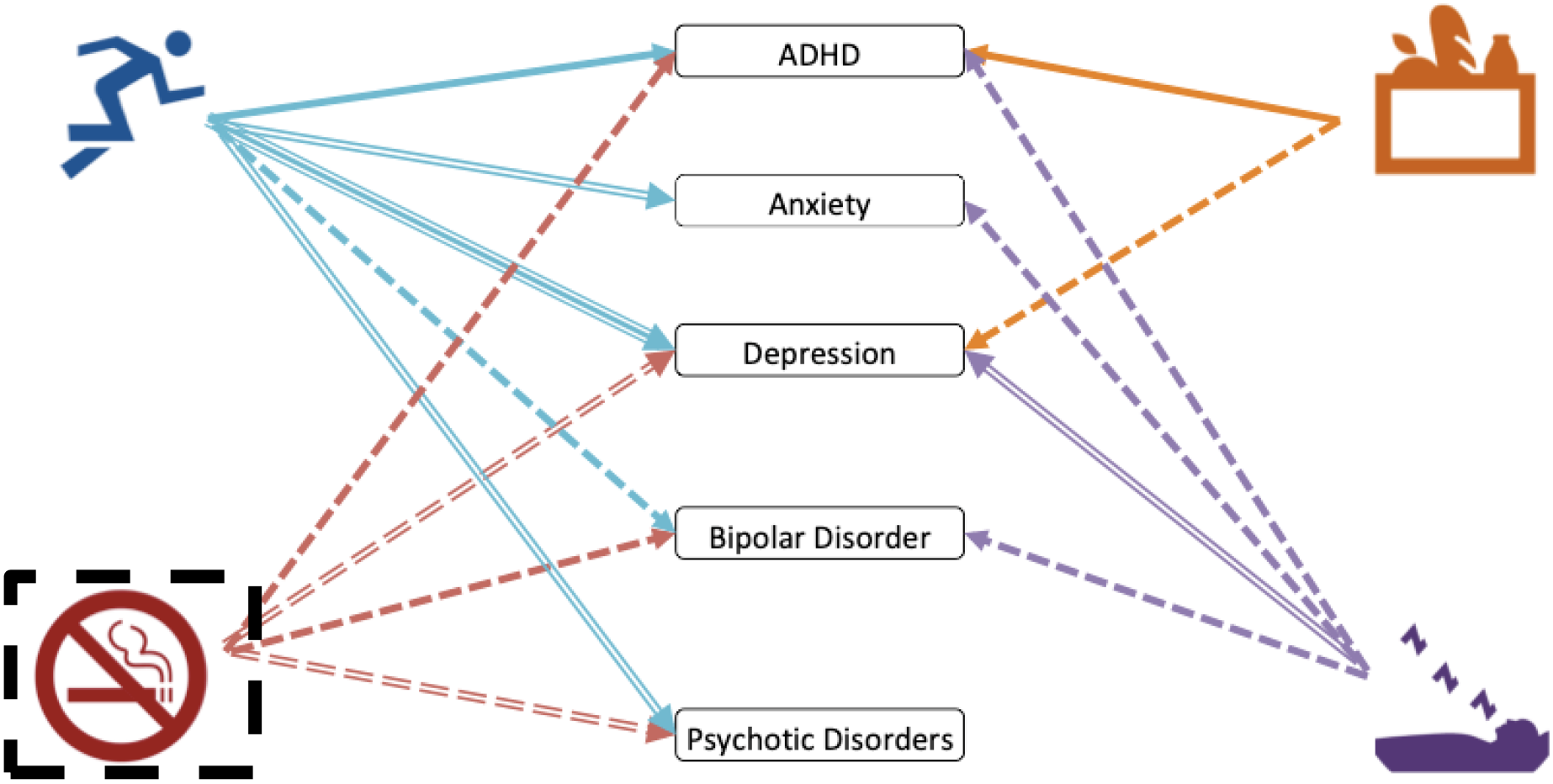
thebmj

Food and mood: how do diet and nutrition affect mental wellbeing?

BMJ 2020 ; 369 doi: https://doi.org/10.1136/bmj.m2382 (Published 29 June 2020)

J Firth, J Gangwisch, A Borsini, R Wootton, EA Mayer





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Psychological Medicine

Evidence for causal effects of lifetime smoking on risk for depression and schizophrenia: a Mendelian randomisation study

Robyn E. Wootton[1,2,3], Rebecca C. Richmond[2,4], Bobby G. Stuijfzand[5],

The Guardian

Smoking may increase risk of mental health problems – study

Researchers find link between tobacco cigarettes and depression and schizophrenia

Cochrane Library
Trusted evidence.
Informed decisions.
Better health.

Cochrane Database of Systematic Reviews | Review - Intervention

Smoking cessation for improving mental health

Gemma MJ Taylor, Nicola Lindson, Amanda Farley, Andrea Leinberger-Jabari, Katherine Sawyer, Rebecca te Water Annika Theodoulou, Naomi King, Chloe Burke, Paul Aveyard Authors' declarations of interest

Compared with people who continued to smoke, people who stopped smoking showed greater improvements in:

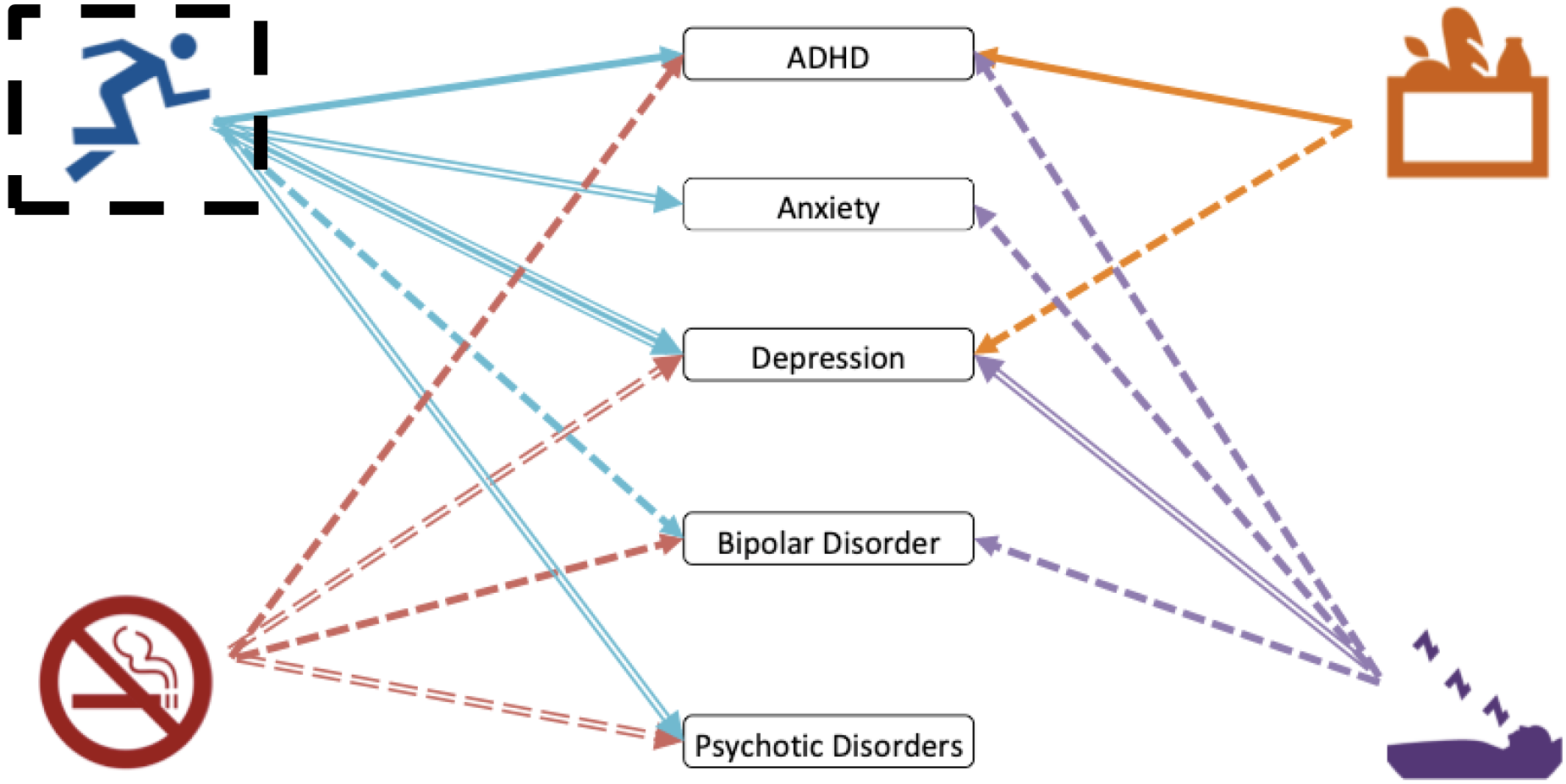
- anxiety (evidence from 3141 people in 15 studies);

- depression (7156 people in 34 studies); and

- symptoms of stress (evidence from 4 studies in 1792 people);

- positive feelings (13 studies in 4880 people); and

- mental well-being (19 studies in 18,034 people).



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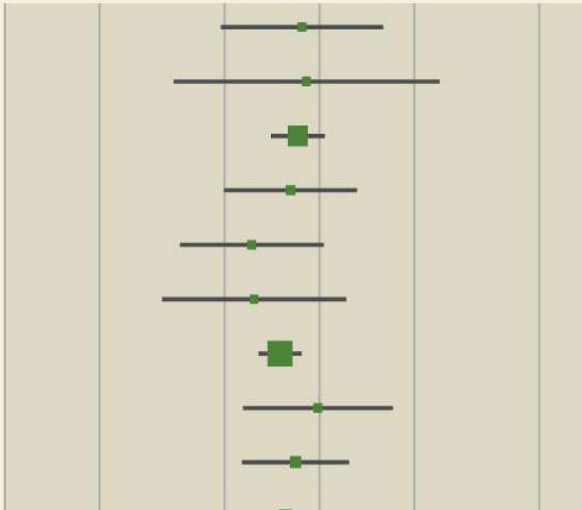
THE AMERICAN JOURNAL OF
PSYCHIATRY

Physical Activity and Incident Depression: A Meta-Analysis of Prospective Cohort Studies

Schuch FB, Vancampfort D, Firth J et al..(2018)

- **Question:** Can physical activity reduce the risk of developing depression over the life-course?
- **Method**: Combining ALL existing data (49 independent studies of over quarter of a million people) comparing onset of depression in non-active vs. active individuals

Study Authors, Year, Reference	Odds Ratio	Lower Limit	Upper Limit	p
Augestad et al., 2008 (30) (men)	0.880	0.484	1.599	0.675
Augestad et al., 2008 (30) (women)	0.910	0.343	2.415	0.850
Baumeister et al., 2017 (31)	0.854	0.699	1.044	0.124
Cabello et al., 2017 (34)	0.810	0.496	1.322	0.399
Chang et al., 2016 (36)	0.610	0.359	1.036	0.068
Chen and Millar, 1999 (37)	0.620	0.315	1.221	0.167
Choi et al., 2015 (38)	0.750	0.639	0.881	0.000
Clark et al., 2007 (39)	0.990	0.570	1.720	0.972
Da Silva et al., 2012 (42)	0.840	0.566	1.247	0.387
España-Romero et al., 2013 (43)	0.780	0.570	1.068	0.121

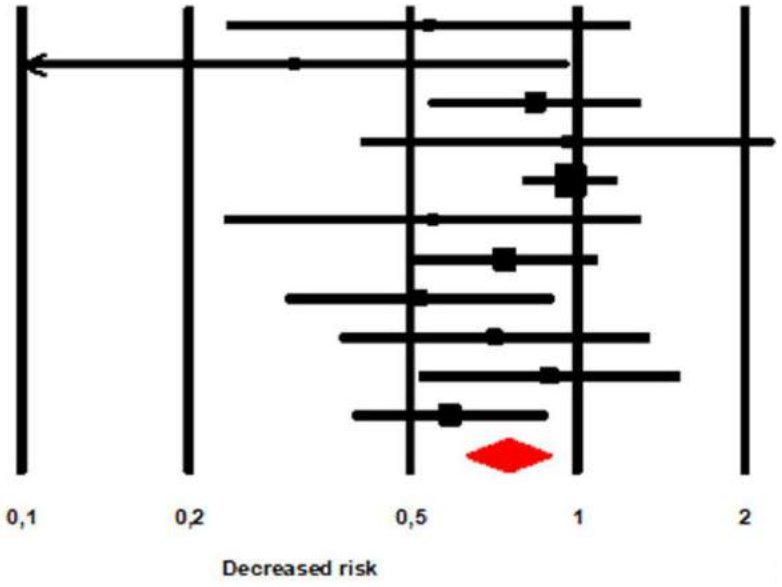


Depression & Anxiety
OFFICIAL PUBLICATION OF THE ANXIETY AND DEPRESSION ASSOCIATION OF AMERICA
ADAA Anxiety & Depression Association of America

REVIEW ARTICLE

Physical activity protects from incident anxiety: A meta-analysis of prospective cohort studies

Study name	number of participants	Statistics for each study			
		Odds ratio	Lower limit	Upper limit	p-Value
Jonsdottir et al., 2011	2818	0,540	0,234	1,245	0,148
Kang et al., 2016	1204	0,310	0,100	0,963	0,043
Da Silva et al., 2012	9309	0,840	0,541	1,304	0,437
McDowell et al., 2018 (1)	3165	0,960	0,409	2,254	0,925
Baumeister et al., 2017	1952	0,970	0,797	1,181	0,761
Pasco et al., 2011	547	0,550	0,233	1,301	0,174
Sanchez-Villegas et al., 2008	10381	0,740	0,503	1,088	0,126
Strohle et al. 2017	2548	0,520	0,299	0,905	0,021
Ten have et al., 2011	4796	0,710	0,374	1,347	0,295
Zainahl et al., 2018	2604	0,890	0,518	1,529	0,673
LeardMann et al., 2011	38883	0,590	0,395	0,881	0,010
		0,748	0,629	0,889	0,001



Contents lists available at ScienceDirect

NeuroImage

journal homepage: www.elsevier.com/locate/neuroimage

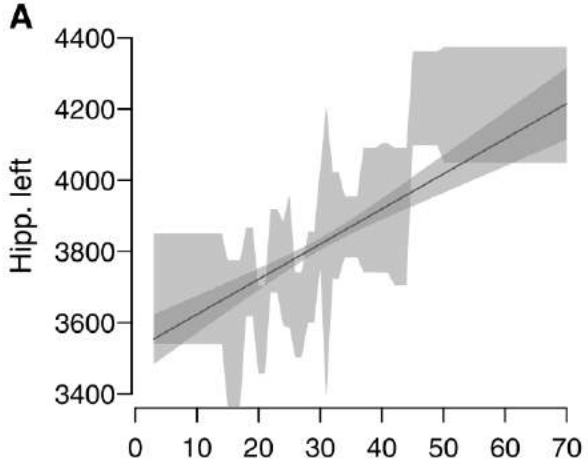
Effect of aerobic exercise on hippocampal volume in humans: A systematic review and meta-analysis

Joseph Firth [a,b,*,1], Brendon Stubbs [c,d,1], Davy Vancampfort [e,f], Felipe Schuch [g,h], Jim Lagopoulos [i], Simon Rosenbaum [j,k,2], Philip B. Ward [j,l,2]

The Official Journal of the American Psychosomatic Society
PSYCHOSOMATIC MEDICINE
Journal of Biobehavioral Medicine

Handgrip Strength Is Associated With Hippocampal Volume and White Matter Hyperintensities in Major Depression and Healthy Controls: A UK Biobank Study

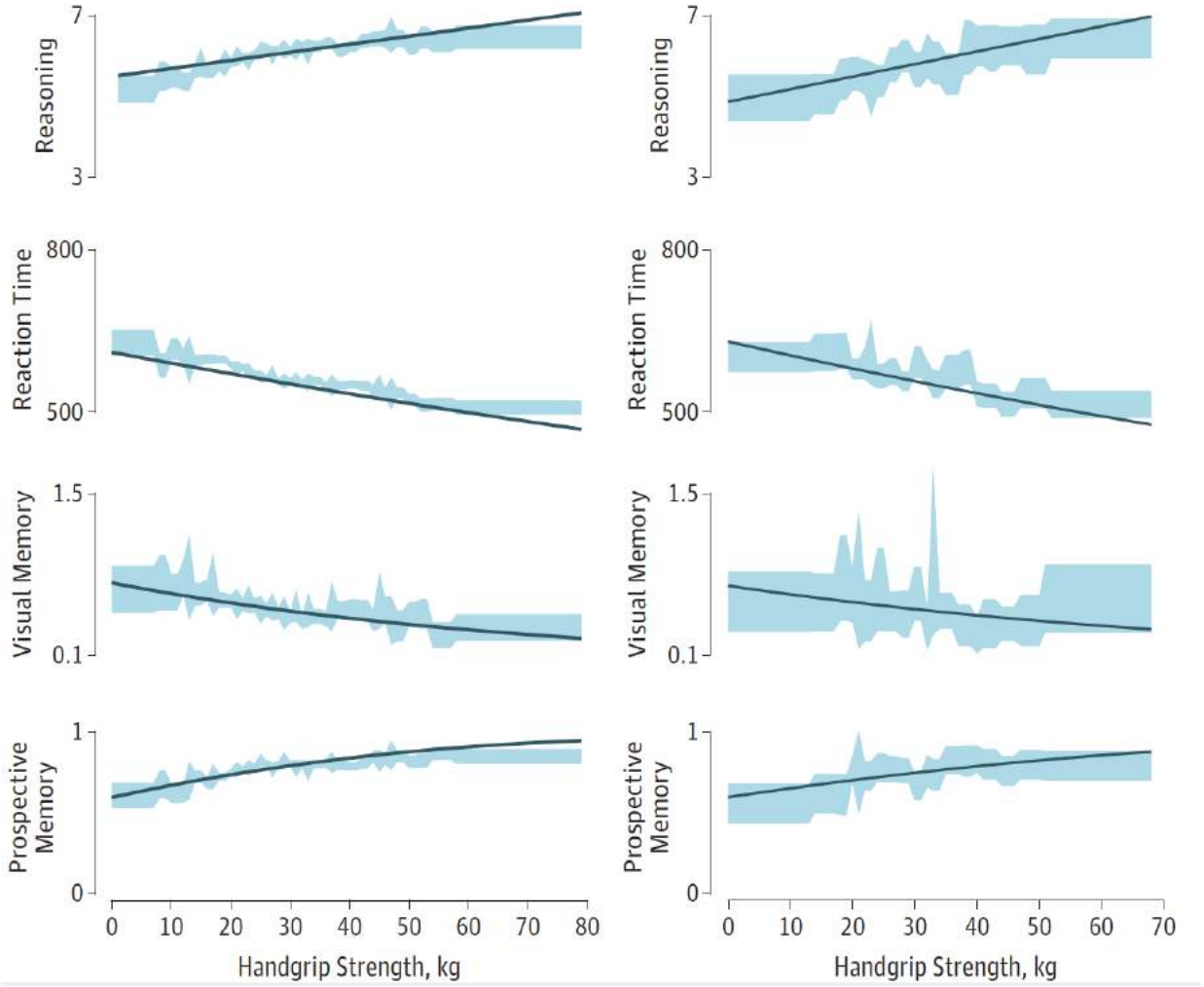
Josh A. Firth, DPhil, Lee Smith, PhD, Jerome Sarris, PhD, Davy Vancampfort, PhD, Felipe Schuch, PhD, Andre F. Carvalho, MD, Marco Solmi, MD, Alison R. Yung, MD, Brendon Stubbs, PhD, and Joseph Firth, PhD



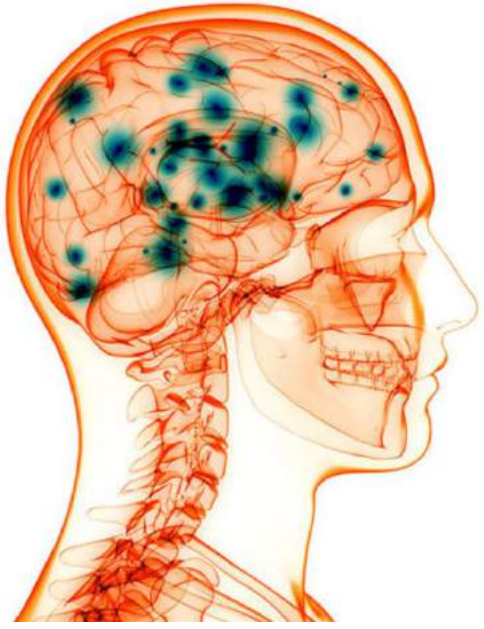
JAMA Psychiatry

Association Between Muscular Strength and Cognition in People With Major Depression or Bipolar Disorder

Joseph Firth, PhD; Josh A. Firth, DPhil; Brendon Stubbs, PhD; Davy Vancampfort, PhD;



Severe Mental Illness



Contents lists available at ScienceDirect

European Psychiatry

journal homepage: http://www.europsy-journal.com

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)

Brendon Stubbs[a,b,*], Davy Vancampfort[c], Mats Hallgren[d], Joseph Firth[e,f], Nicola Veronese[g], Marco Solmi[h], Serge Brand[i,j,k], Joachim Cordes[l], Berend Malchow[m],

Major Depressive Disorders

- Improves Fitness
- Improves Quality of Life
- Reduces Symptoms

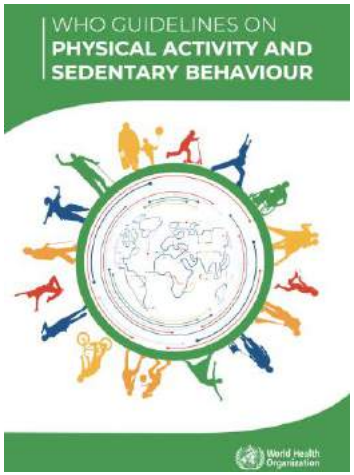
Psychotic Disorders

- Improves Fitness
- Improves Cognition
- Reduces Symptoms

For all SMI, available evidence shows that Exercise: (a) is Safe, and **(b) Works best when delivered by fitness professional**

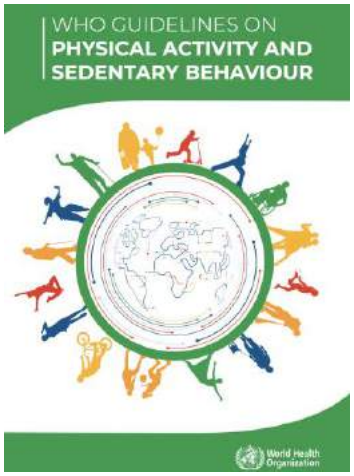
WHO GUIDELINES ON PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

World Health Organization



World Health Organization

1. Physical activity is good for hearts, bodies and minds.



World Health Organization

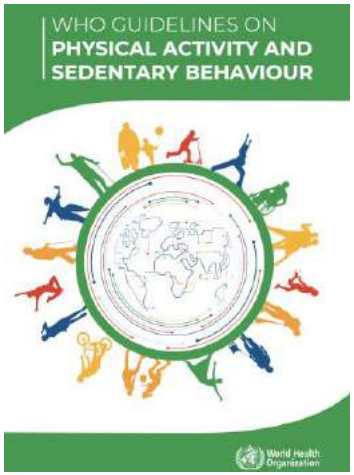
People living with chronic conditions or disability

DISABILITIES

- Major clinical depression
- Intellectual disability
- Parkinson's disease
- A history of stroke
- Spinal cord injury
- Multiple sclerosis
- Schizophrenia
- ADHD

CHRONIC CONDITIONS

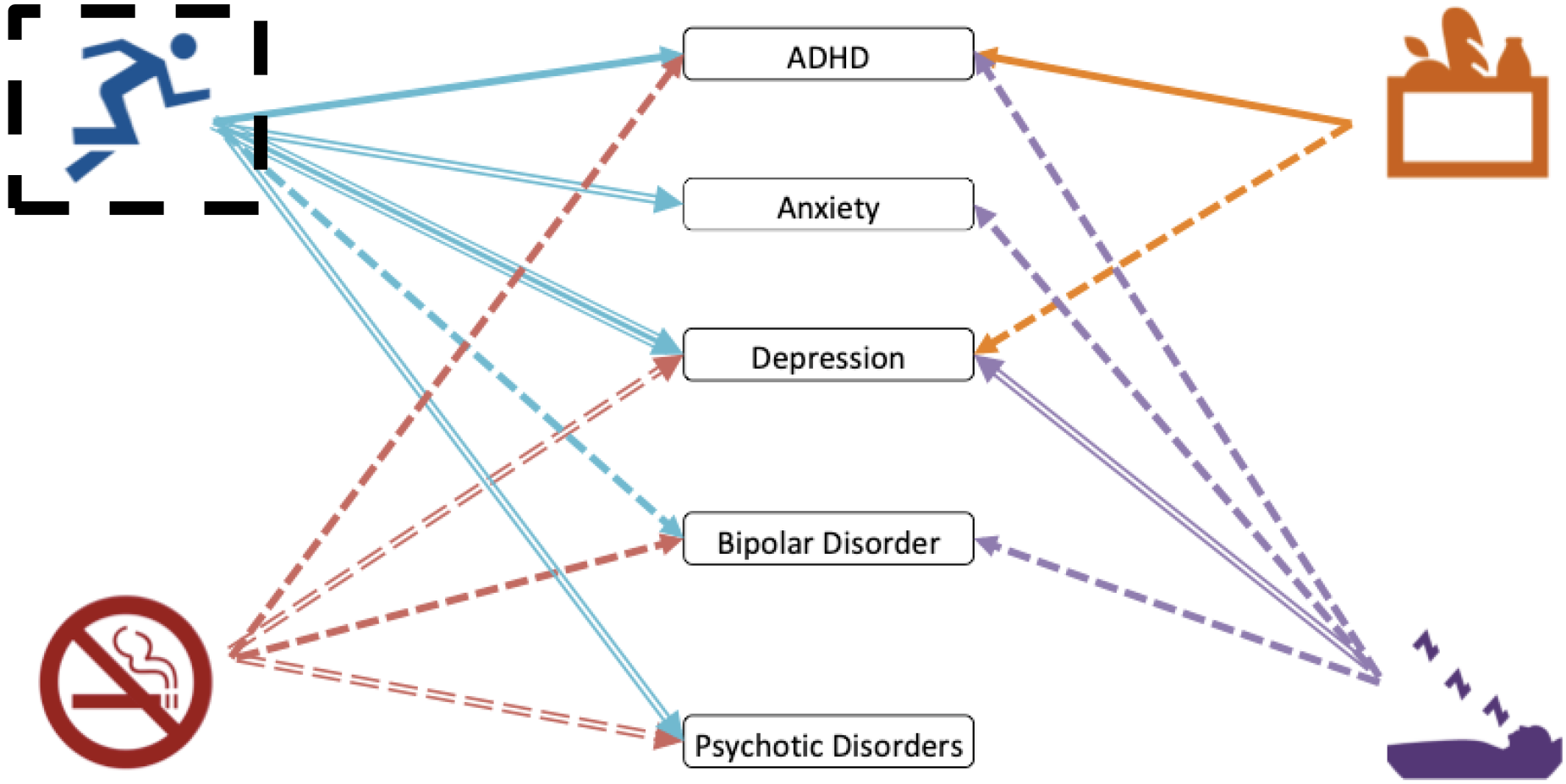
- Cancer survivors
- People living with hypertension
- People living with type-2 diabetes
- People living with HIV



World Health Organization

Adults and older adults

150-300 min/week of moderate or 75-150 min/week of vigorous physical activity, plus 2 days/week of muscle-strengthening activities.



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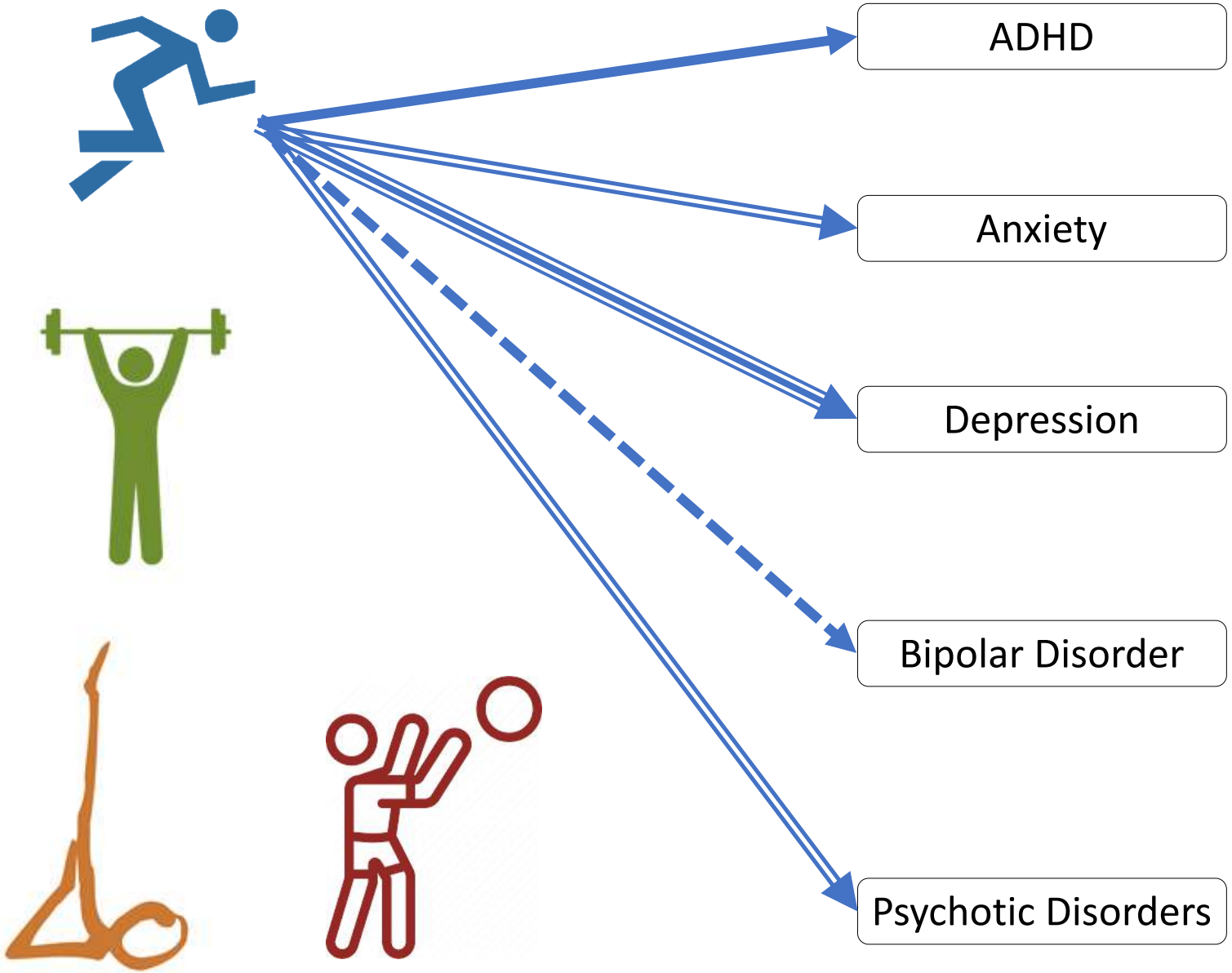
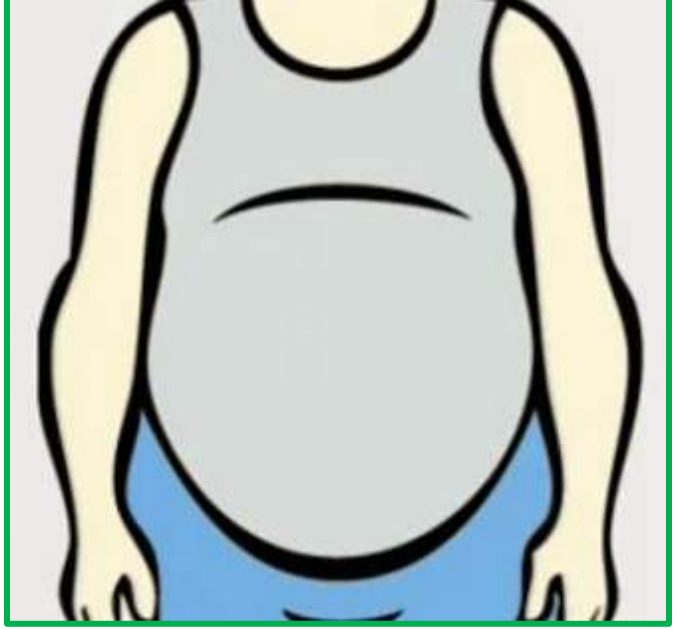

ADHD
Anxiety
Depression
Bipolar Disorder
Psychotic Disorders



Lifestyle Medicine & Mental Illness

HEALTHY BODY

HEALTHY MIND

“To keep the body in good health is a duty, otherwise we shall not be able to keep our mind strong and clear.”

The Buddha ~500 BC


DOCTOR
Okay, so who is first?

The New York Times

The Largest Health Disparity We Don't Talk About

Americans with serious mental illnesses die 15 to 30 years earlier than those without.

THE LANCET PSYCHIATRY COMMISSION | VOLUME 6, ISSUE 8, P675-712, AUGUST 01, 2019

PDF [1 MB] F

The *Lancet Psychiatry* Commission: a blueprint for protecting physical health in people with mental illness

Joseph Firth, PhD • Najma Siddiqi, PhD * • Ai Koyanagi, MD * • Dan Siskind, PhD * • Simon Rosenbaum, PhD * • Prof Cherrie Galletly, MD * • Stephanie Allan, MA • Constanza Caneo, MD • Rebekah Carney, PhD • Prof Andre F Carvalho, MD • Mary Lou Chatterton, PharmD • Prof Christoph U Correll, MD • Prof Jackie Curtis, MBBS • Fiona Gaughran, MD • Adrian Heald, DM • Erin Hoare, PhD • Sarah E Jackson, PhD • Prof Steve Kisely, DMedRes • Prof Karina Lovell, PhD • Prof Mario Maj, MD • Prof Patrick D McGorry, MD • Prof Cathrine Mihalopoulos, PhD • Hannah Myles, MBBS • Brian O'Donoghue, PhD • Toby Pillinger, MRCP • Prof Jerome Sarris, PhD • Prof Felipe B Schuch, PhD • David Shiers, MBChB • Lee Smith, PhD • Marco Solmi, MD • Shuichi Suetani, MD • Johanna Taylor, PhD • Scott B Teasdale, PhD • Prof Graham Thornicroft, PhD • John Torous, MD • Prof Tim Usherwood, MD • Prof Davy Vancampfort, PhD • Nicola Veronese, MD • Prof Philip B Ward, PhD • Prof Alison R Yung, MD • Prof Eoin Killackey, DPsych † • Brendon Stubbs, PhD †

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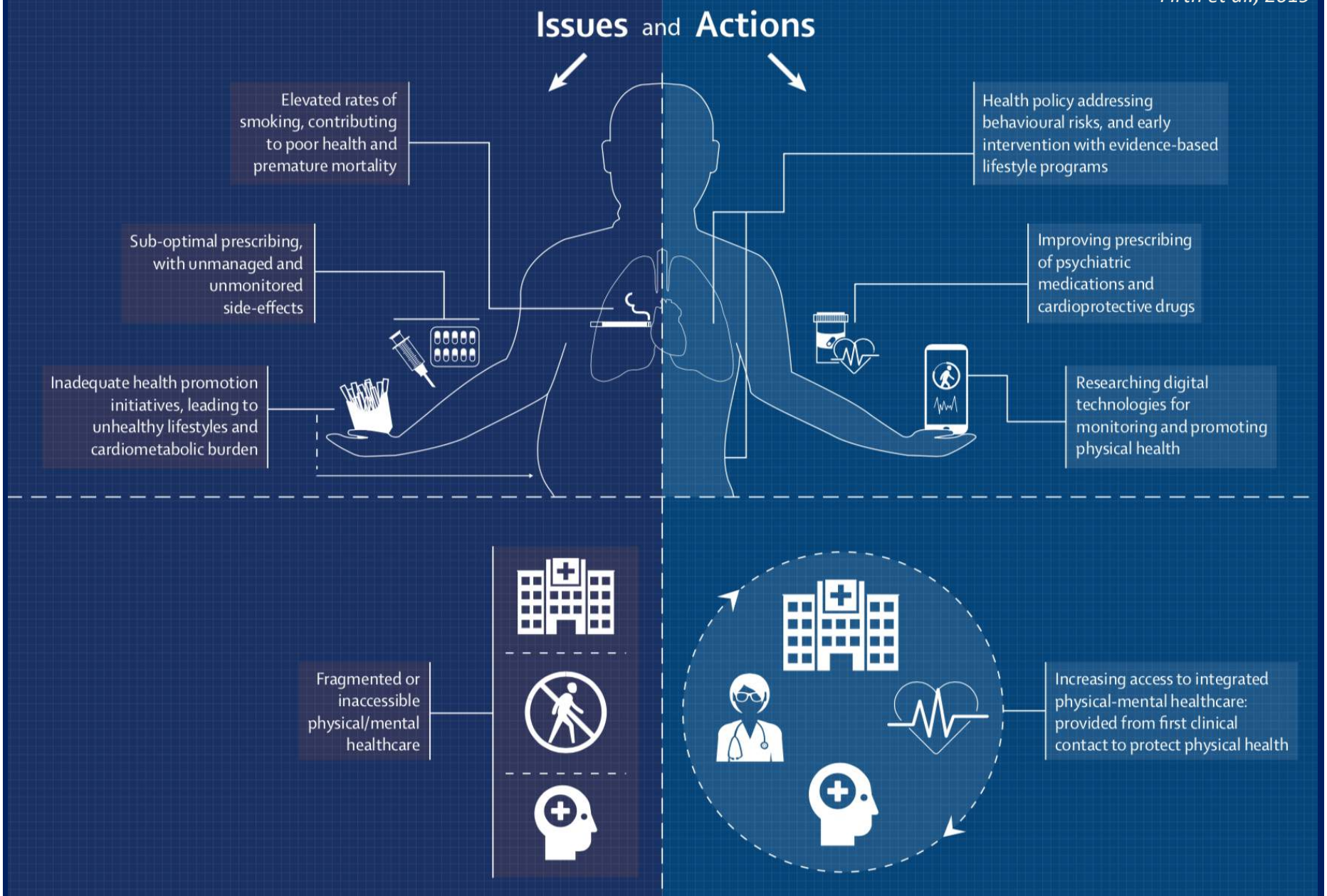
A Blueprint for Protecting Physical Health in Mental Illness

Firth et al., 2019



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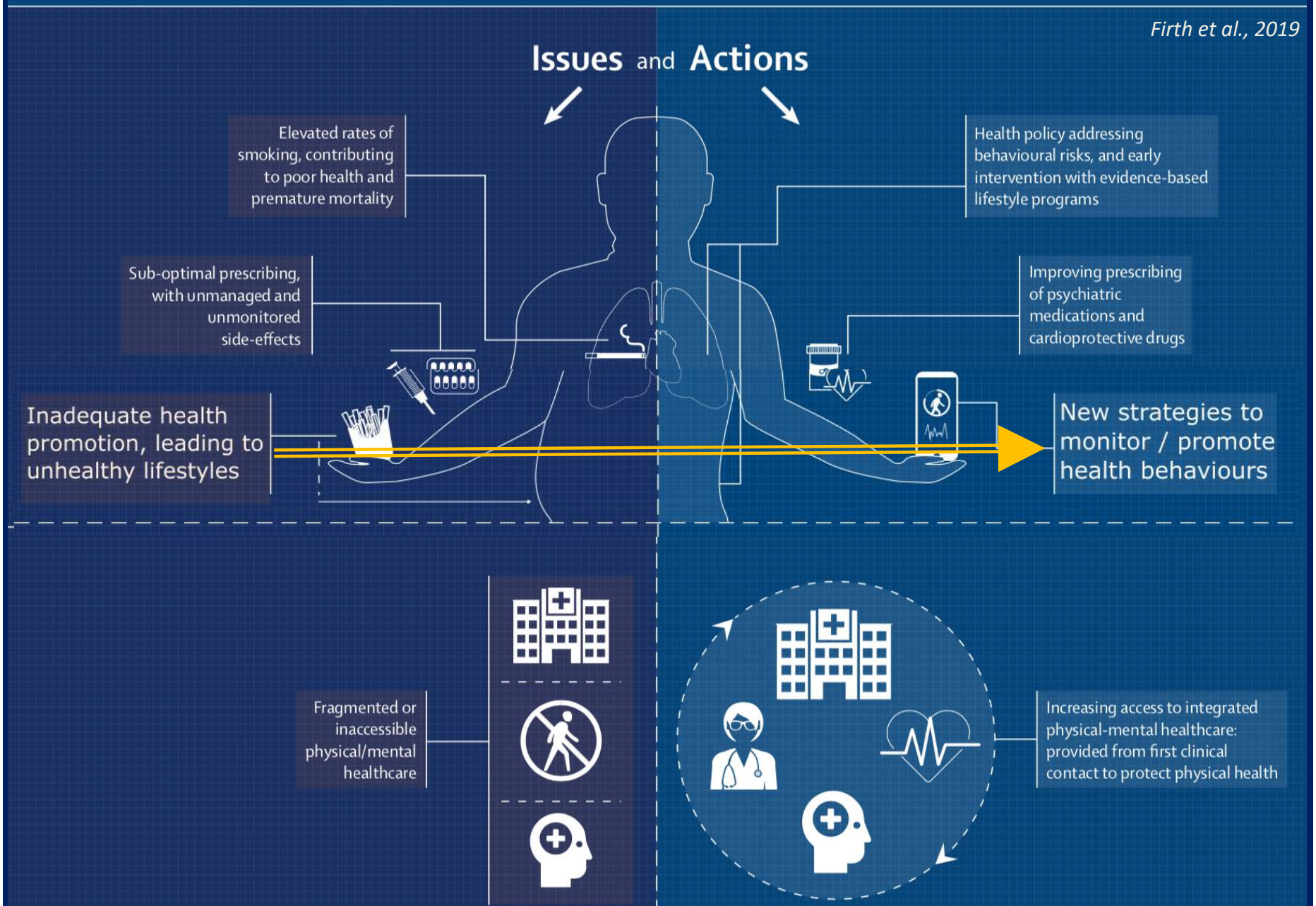
Firth et al., 2019



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PDF [1 MB]

The *Lancet Psychiatry* Commission: a blueprint for protecting physical health in people with mental illness

Firth et al., 2019

St Charles Hospital, London: **Live More, Nile Ward PICU**

South East Sydney Local Health District: **Keeping the Body in Mind (KBIM)**

The KBIM team includes:

- A **Clinical Nurse Consultant** who will help you to decide what changes you would like to make and keep track of your physical health.
- An **Exercise Physiologist** who can support you to find ways to be more active and enjoy keeping fit. This can include both individual and group activities.
- A **Dietitian** who can help you to make positive changes with your food choices and teach you new cooking skills.
- A **Peer Support Worker** who has a lived experience of mental health concerns, and can support and encourage you along the way.

Dr. Joseph Firth

Joseph.firth@manchester.ac.uk