

Træning som sygdoms mestring

05/10/2023

Roskilde

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Editor's Choice

The miracle cure

BMJ 2019 ; 366 doi: <https://doi.org/10.1136/bmj>

Cite this as: BMJ 2019;366:l5605

Editorial

**Physical activity as medicine:
time to translate evidence into
clinical practice**

Mai-Lis Hellénus,¹ Carl Johan Sundberg²

Review



EDITOR'S
CHOICE

**Evidence on the effects of exercise therapy in the
treatment of chronic disease**

U M Kujala

ExeRxcise
is Medicine®

**AMERICAN COLLEGE
of SPORTS MEDICINE®**



My logic model for today



My logic model for today



Take a
deep breath

A bit about myself



My mission

- To identify effective treatments and implement them in clinical practice

We found that exercise therapy...

IMPROVES PHYSICAL FUNCTION

IMPROVES HEALTH-RELATED QUALITY OF LIFE

REDUCES DEPRESSION AND ANXIETY

APPEARS NOT TO INCREASE ADVERSE EVENTS

THE BELIEF THAT THERAPEUTIC EXERCISE MAY HARM THE KNEE JOINT CARTILAGE IS STILL COMMON AMONG PEOPLE WITH KNEE OSTEOARTHRITIS AND HEALTH PROFESSIONALS TREATING THE CONDITION

CONTRARY TO THIS COMMON BELIEF...

THERAPEUTIC EXERCISE IS SAFE FOR ARTICULAR CARTILAGE

Ageing Research Reviews 63 (2020) 101166

Contents lists available at ScienceDirect

Ageing Research Reviews

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

Benefits and harms of exercise therapy in people with multimorbidity: A systematic review and meta-analysis of randomised controlled trials

Alessio Bricca^{a,b,*}, Lasse K. Harris^{a,b}, Madalina Jäger^{a,b}, Susan M. Smith^c, Carsten B. Juhl^{a,d}, Søren T. Skou^{a,b}

* Research Unit for Musculoskeletal Function and Physiotherapy, Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, 5230, Odense M, Denmark
^a Department of Physiotherapy and Occupational Therapy, Nærved-Gløgelse-Ringsted Hospitals, Region Zealand, 4200, Slagelse, Denmark
^b HEB Centre for Primary Care Research, Department of General Practice, Royal College of Surgeons in Ireland (RCSI), Dublin, Ireland
^c Department of Physiotherapy and Occupational Therapy, University Hospital of Copenhagen Herlev and Gentofte, Copenhagen, Denmark

Consensus statement

OPTIKNEE 2022: consensus recommendations to optimise knee health after traumatic knee injury to prevent osteoarthritis

Jackie L Whittaker^{1,2,3}, Adam G Culvenor⁴, Carsten Bøgh Juhl^{5,6}, Bjørnar Berg^{7,8}, Alessio Bricca^{9,10}, Stephanie Rose Filbay¹¹, Pætur Holm^{6,10}, Erin Macri^{12,13,14}, Anouk P Urhausen¹⁵, Clare L Ardern^{4,12}, Andrea M Bruder⁴, Garrett S Bullock¹⁶, Allison M Ezzat¹⁷, Michael Girdwood⁴, Melissa Haberfield⁴, Mick Hughes¹⁷, Lina Holm Ingelsrud¹⁸

AMERICAN COLLEGE OF RHEUMATOLOGY
EDUCATION • TREATMENT • RESEARCH

Arthritis Care & Research
Vol. 71, No. 2, February 2019, pp 218-226
DOI: 10.1093/acr/22779
© 2018, American College of Rheumatology

ACTIVITY AND THE RHEUMATIC DISEASES

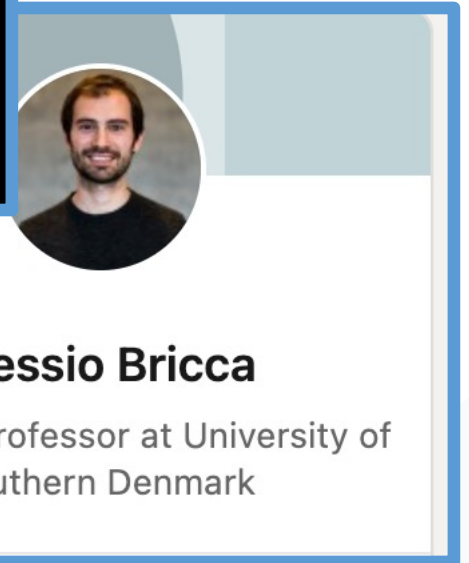
Moderate Physical Activity and Prevention of Cartilage Loss in People With Knee Osteoarthritis: Data From the Osteoarthritis Initiative

Alessio Bricca,¹ Wolfgang Wirth,² Carsten B. Juhl,³ Jana Kernlitz,⁴ David J. Hunter,⁵ C. Kent Kwok,⁶ Felix Eckstein,² and Adam G. Culvenor⁷



My mission

- To identify effective treatments and implement them in clinical practice
- To disseminate knowledge



LET'S GET

STARTED



Editor's Choice

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Physical activity as medicine: time to translate evidence into clinical practice

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Evidence on the effects of exercise therapy in the treatment of chronic disease

J.M. Kwiatkowski

ExeRxcise
is Medicine[®]

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of SPORTS MEDICINE[®]**

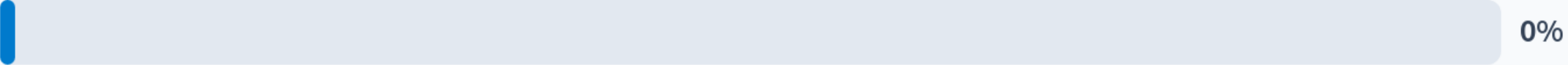


PollEv.com/alessiobricca735

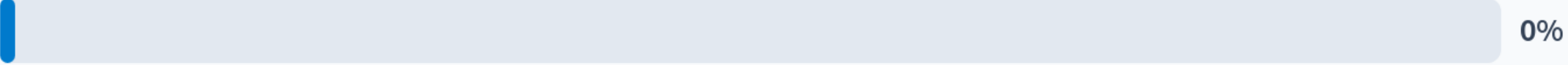


Does 'exercise,' 'exercise therapy,' and 'physical activity' all mean the same thing?

Yes

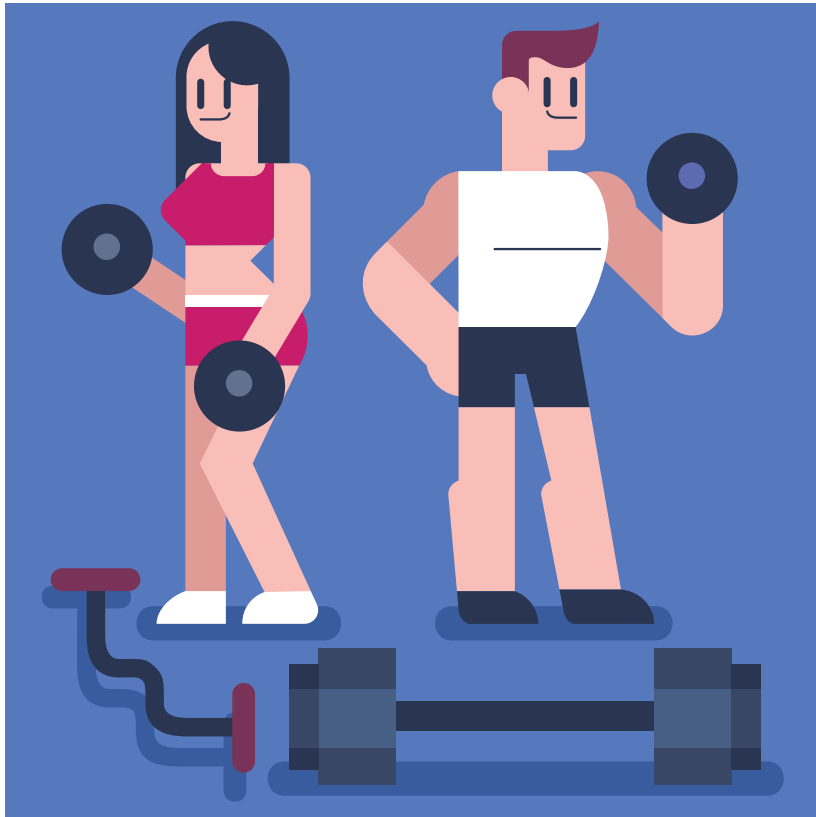


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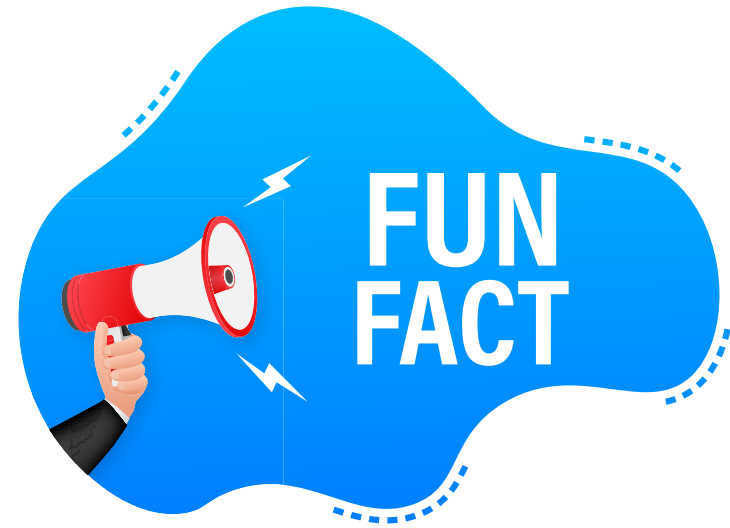
EXERCISE

A plan of physical activities targeting physical fitness



EXERCISE

A plan of physical activities targeting physical fitness

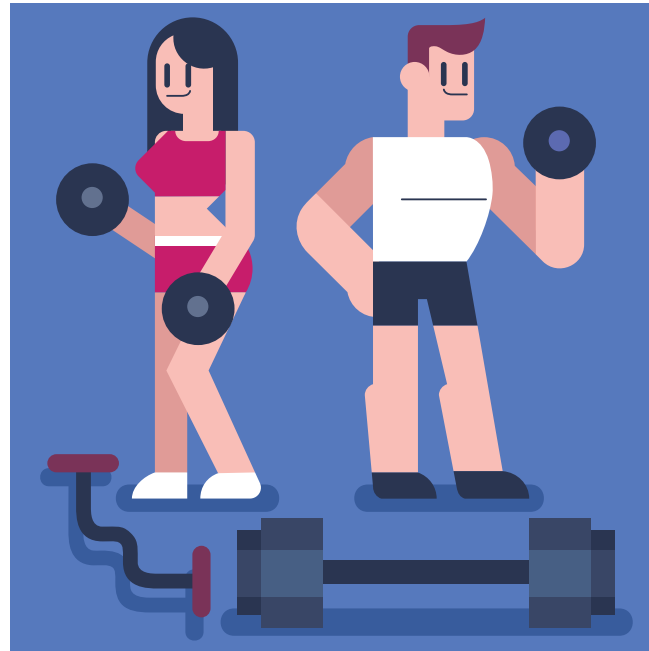


Picture from: <https://ultra-x.co/tarahumara-marathon-runners/>



EXERCISE

A plan of physical activities targeting physical fitness





EXERCISE THERAPY

A plan of physical activities designed and prescribed for specific therapeutic goals



EXERCISE THERAPY

A plan of physical activities designed and prescribed for specific therapeutic goals



Hippocrates (460–370 BCE), set a milestone by providing a written exercise therapy prescription for a patient battling tuberculosis

Claudius Galenus or Galen (129–210 CE), the influential figure from ancient Rome, shaped medical history with his recommendation on exercise therapy in disease management

600 BCE Susruta of India was the first “recorded” physician to prescribe exercise therapy for his patients but not too little & not too much

Hua T'O [100 Common Era (CE)] advocated activities (labeled as frolic exercises) that simulated the actions of deers, tigers, bears, cranes, and monkeys



EXERCISE THERAPY

A plan of physical activities designed and prescribed for specific therapeutic goals

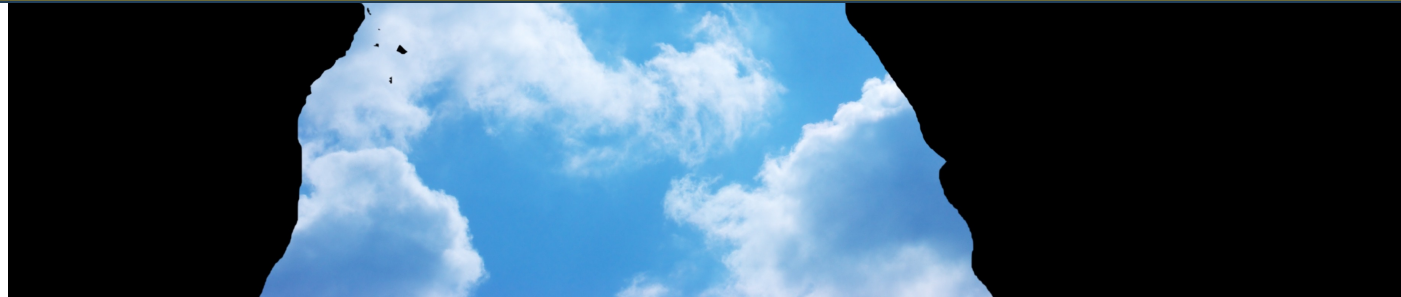


EXERCISE THERAPY

A plan of physical activities designed and prescribed for specific therapeutic goals



HAS ANYTHING CHANGED?



EXERCISE THERAPY

A plan of physical activities designed and prescribed for specific therapeutic goals

SCANDINAVIAN JOURNAL OF
MEDICINE & SCIENCE IN SPORTS

Free Access

Evidence for prescribing exercise as therapy in chronic disease

B. K. Pedersen, B. Saltin

First published: 01 February 2006 | <https://doi.org/10.1111/j.1600-0838.2006.00520.x> | Citations: 811



- Key component of the treatment of at least 26 chronic conditions
- Exercise therapy is a first line treatment

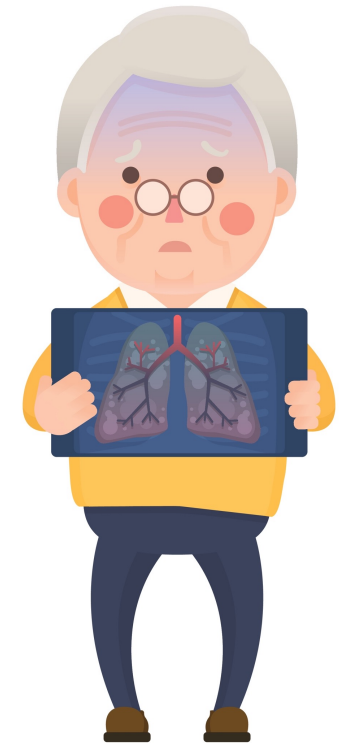


EXERCISE THERAPY

A plan of physical activities designed and prescribed for specific therapeutic goals

65 RCTs involving
3822 patients

- **Relieves dyspnoea and fatigue**
- **Improves emotional function**
- **Enhances the sense of control that individuals have over their condition**

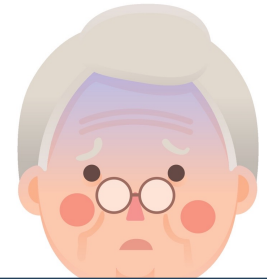


EXERCISE THERAPY

A plan of physical activities designed and prescribed for specific therapeutic goals

65 RCTs involving
3822 patients

- **Relieves dyspnoea and fatigue**



Clinically relevant results!

**that individuals have over their
condition**

McCarthy B, Casey D, Devane D, Murphy K, Murphy E, Lacasse Y. Pulmonary rehabilitation for chronic obstructive pulmonary disease. Cochrane Database of Systematic Reviews 2015

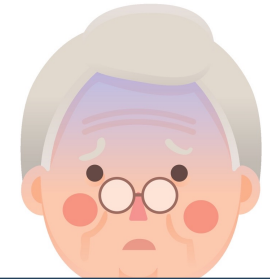


EXERCISE THERAPY

A plan of physical activities designed and prescribed for specific therapeutic goals

65 RCTs involving
3822 patients

- **Relieves dyspnoea and fatigue**



Additional RCTs comparing exercise therapy vs. conventional care in COPD are not warranted

that individuals have over their condition



EXERCISE THERAPY

A plan of physical activities designed and prescribed for specific therapeutic goals

Hospital based seems to promote better outcomes (CRQ) than the community based



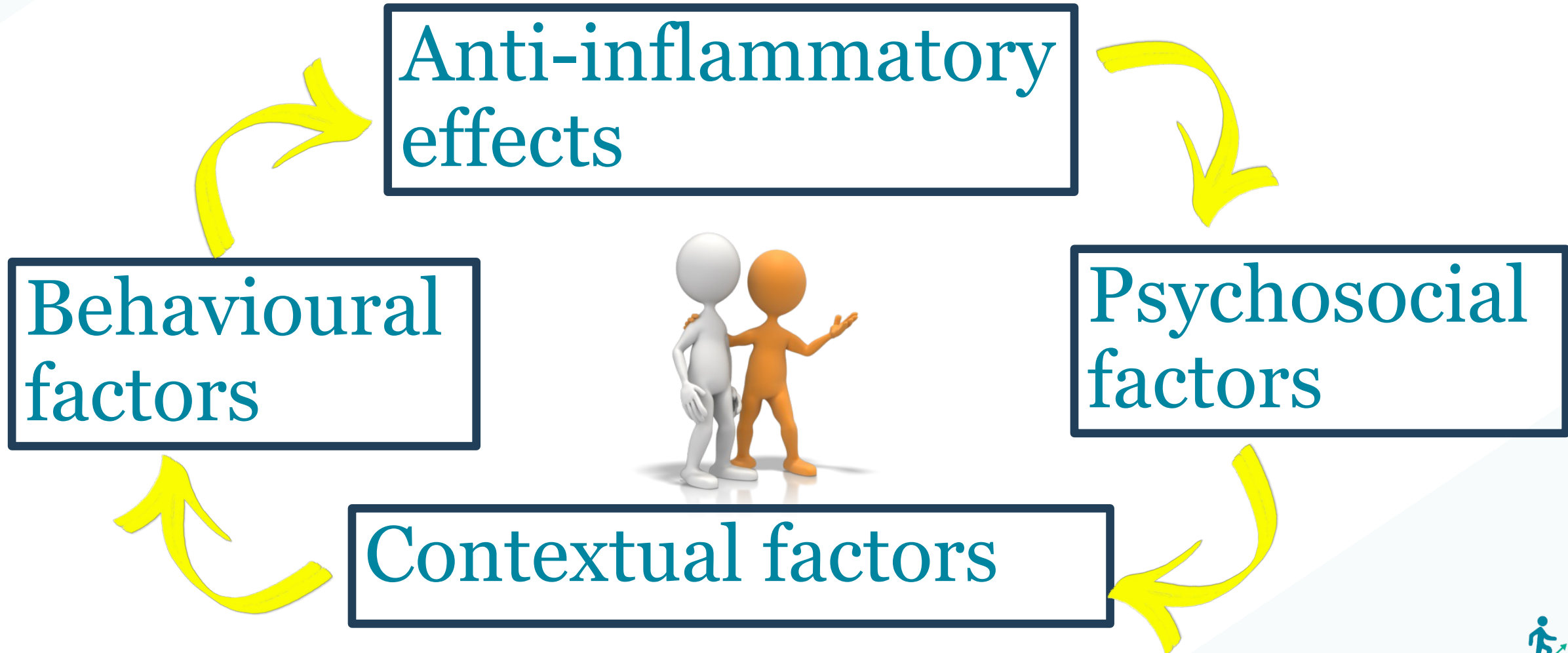
EXERCISE THERAPY

A plan of physical activities designed and prescribed for specific therapeutic goals

Is there an optimal type of exercise therapy?



How does exercise therapy might work?



EXERCISE THERAPY

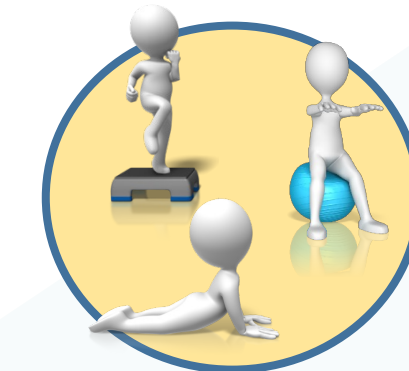
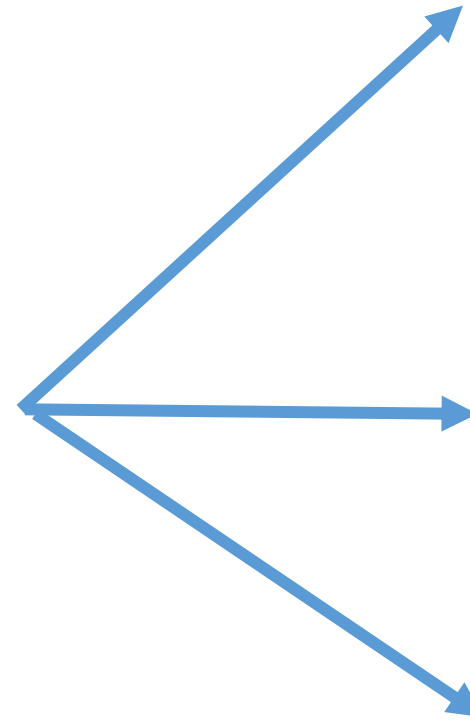
A plan of physical activities designed and prescribed for specific therapeutic goals

Probably there are **MANY** optimal exercise therapy programs

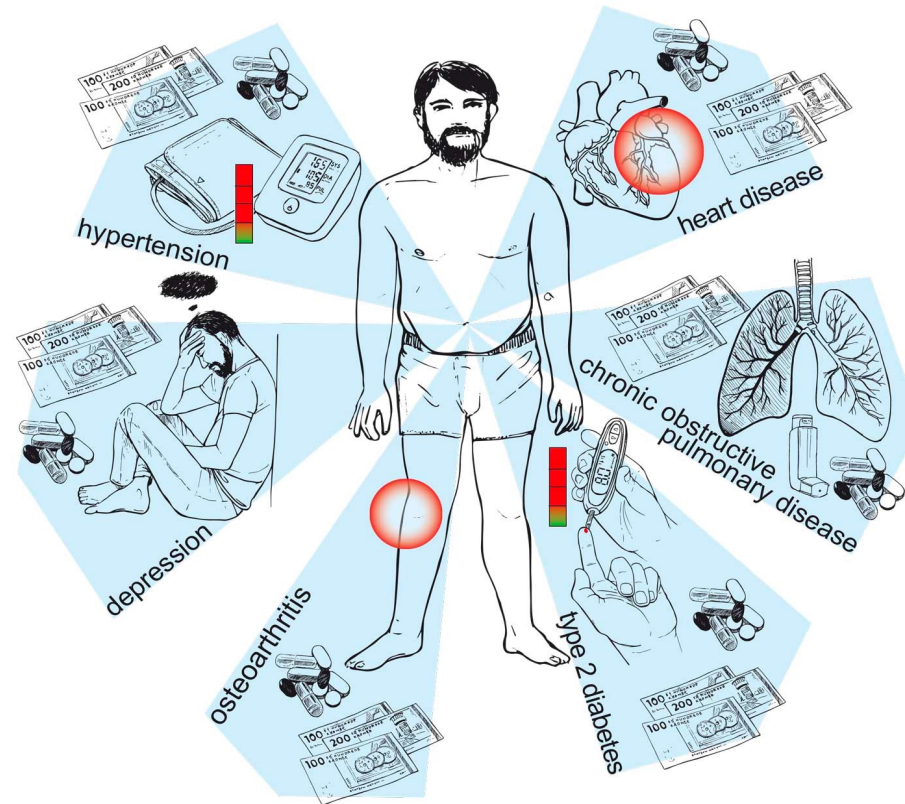


A shared decision process

Include patient preferences



How about when a person present with 2 chronic conditions?



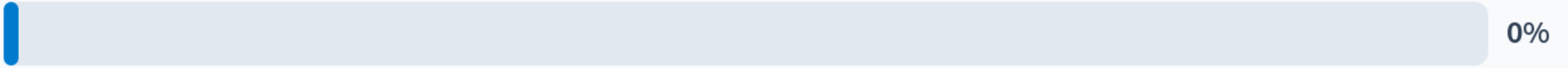


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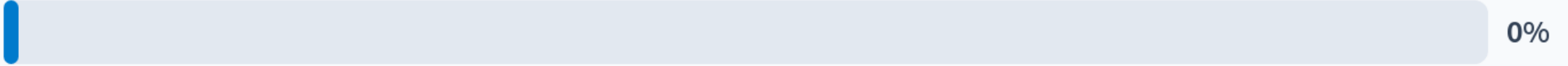
Does exercise therapy work the same in people with multimorbidity?

Yes



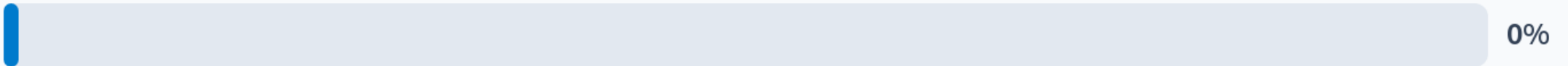
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Probably yes



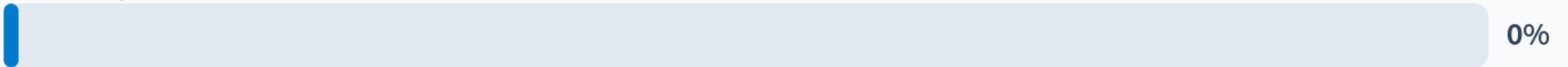
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No



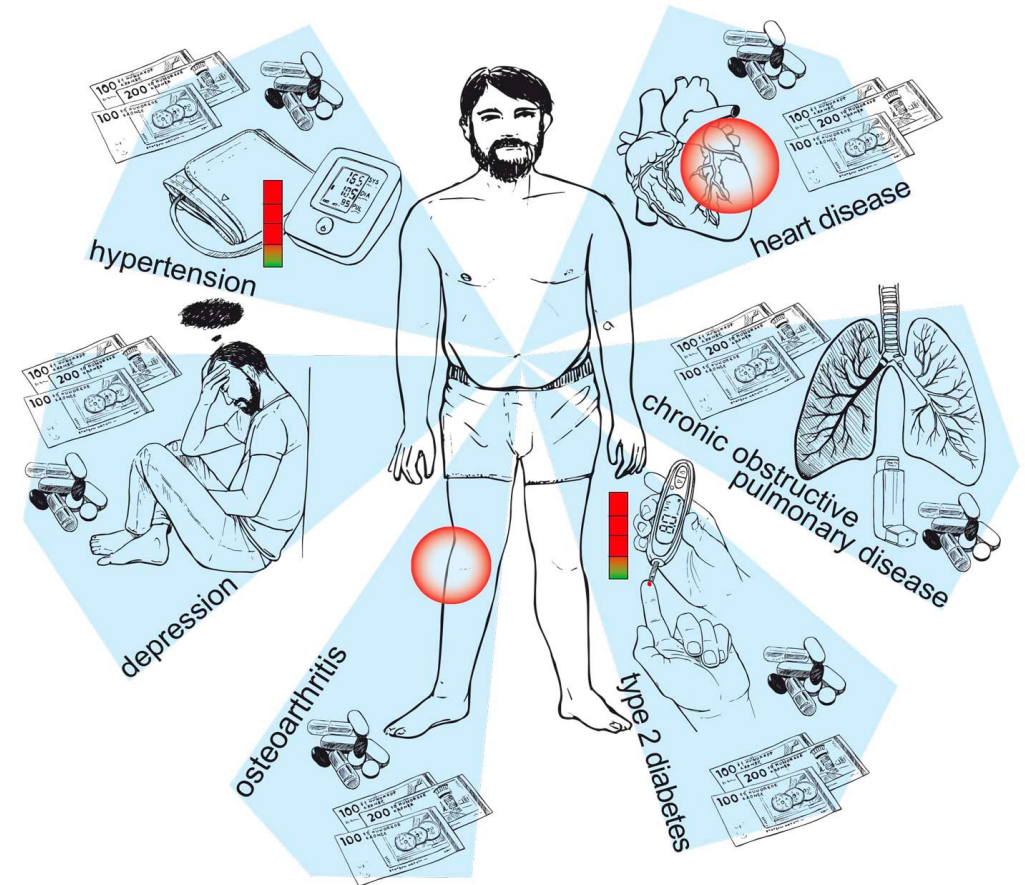
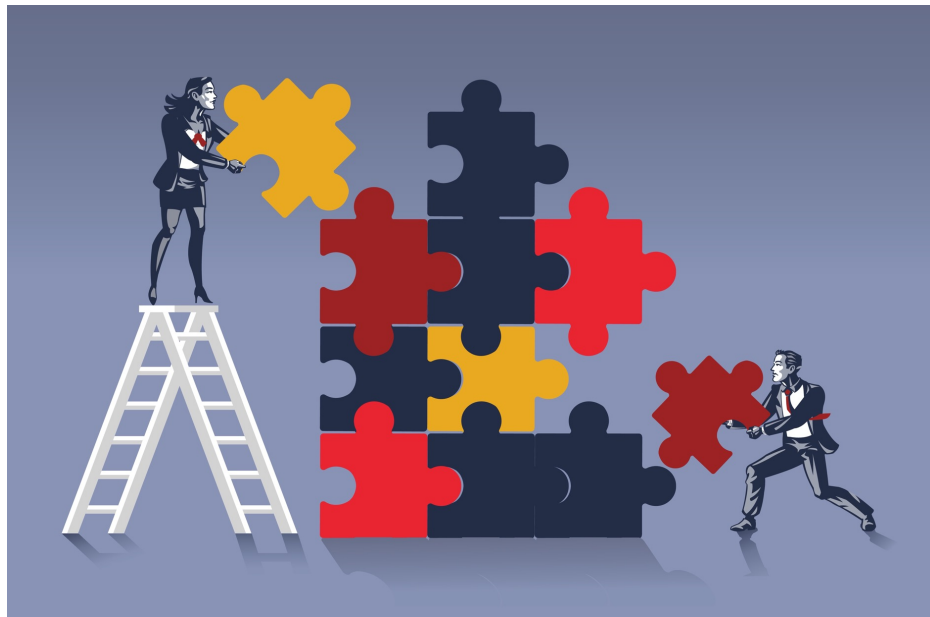
0%

Probably know



0%

How about when a person present with 2 chronic conditions?



<https://www.mobilize-project.dk/?lang=en>



5 EVIDENSBASERED E FACTS OM TRÆNING TIL MENNESKER MED MULTISYGDOM*



*Multisygdom er defineret som tilstedeværelsen af minimum to af følgende sygdomme hos det samme individ: knæ- eller hofteartrose, KOL, hjertesvigt, iskæmisk hjertesygdom, forhøjet blodtryk, type 2 diabetes, depression

1 FORBEDRER LIVSKVALITET
Træning medfører en lille til moderat forbedring i livskvalitet

2 FORBEDRER FYSISK FUNKTION
Træning medfører en lille til moderat forbedring i fysisk funktion

3 REDUCERER DEPRESSION
Træning medfører en lille til stor reduktion i symptomer på depression



TRÆNING TIL MENNESKER MED MULTISYGDOM...



5 ER SIKKER
Træning øger ikke risikoen for ikke-alvorlige bivirkninger og reducerer risikoen for alvorlige bivirkninger

4 REDUCERER ANGST
Træning medfører en meget lille til stor reduktion i symptomer på angst





But is it safe?

Exercise therapy seems to
NOT INCREASE the risk of
NON-SERIOUS adverse events

Knee, arm or back pain, falls,
arrhythmias, syncope, fatigue and
sexual problems

Exercise therapy seems to
REDUCE the risk of **SERIOUS**
adverse events

Hospitalisation, pneumonia,
cardiac decompression and
uncontrolled ventricular arrhythmia,
sepsis, and extreme fatigue

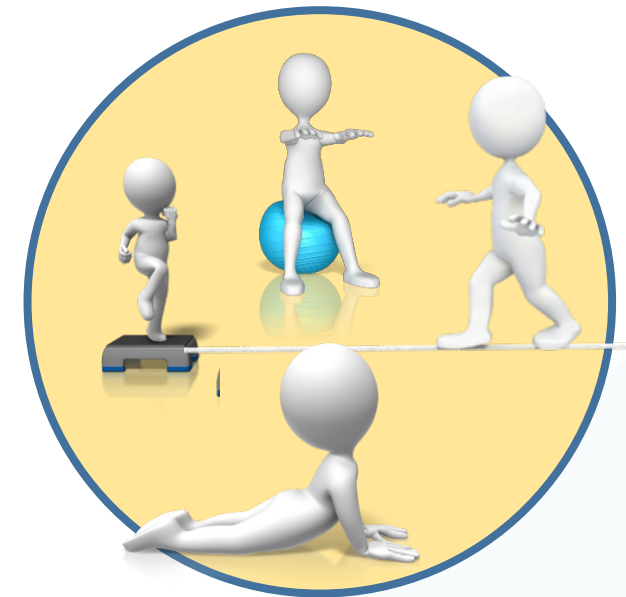
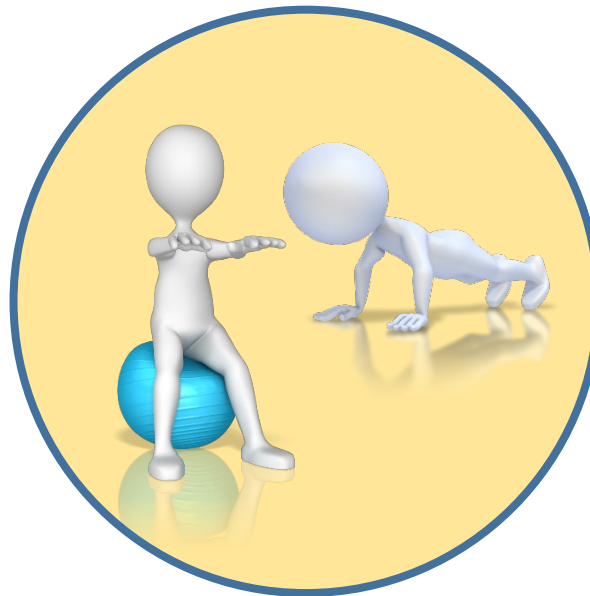


All exercise therapy types improve health

Aerobic exercise therapy

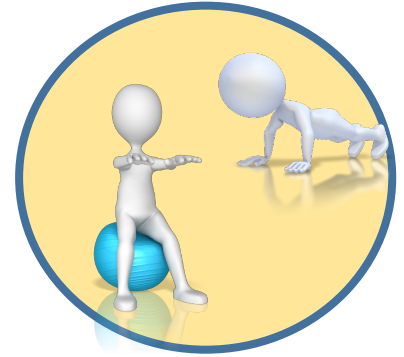
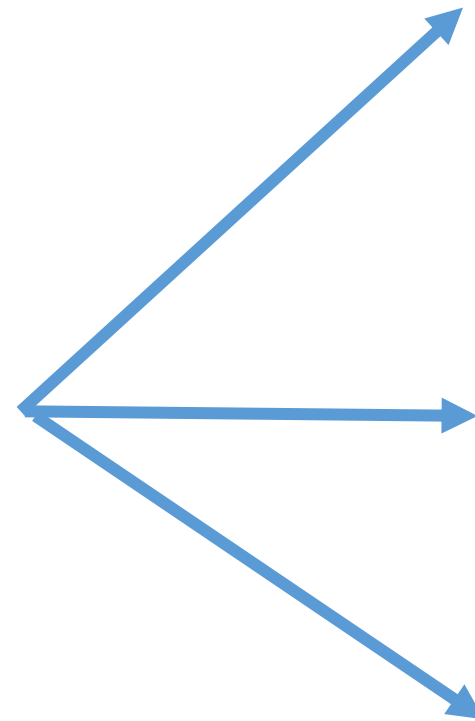
Strengthening exercise therapy

Combination of aerobic, strengthening, balance and flexibility exercise therapy

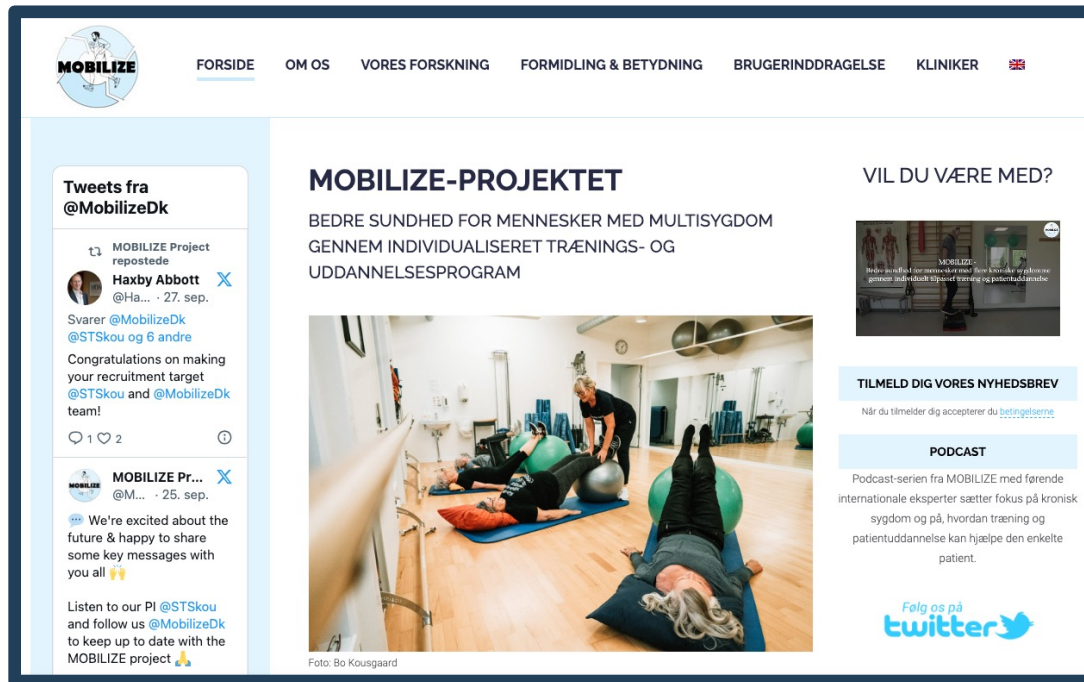
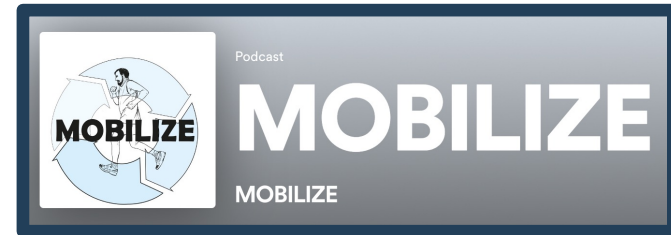


A shared decision process

Include patient preferences



The MOBILIZE project



MOBILIZE-PROJEKTET
BEDRE SUNDHED FOR MENNESKER MED MULTISYGDOM
GENNEM INDIVIDUALISERET TRÆNINGS- OG
UDDANNELSESPROGRAM

VIL DU VÆRE MED?

TILMELD DIG VORES NYHEDSBREV
Når du tilmelder dig accepterer du [betingelserne](#)

PODCAST
Podcast-serien fra MOBILIZE med førende internationale eksperter sætter fokus på kronisk sygdom og på, hvordan træning og patientuddannelse kan hjælpe den enkelte patient.

[Følg os på twitter](#)

Foto: Bo Kousgaard



MOBILIZE 1.2MB Public P. 0

Contributors: Alessio Bricca, Madalina Jäger, Søren Thorgaard Skou, Kenneth Pihl, Lasse Kindler Harris, Mette Diderksen, Rasmus Brødsgaard
Date created: 2019-10-03 04:07 PM | Last Updated: 2023-03-21 11:40 AM
Category: Project

Description: *The aim of the MOBILIZE project is to empower patients with multimorbidity to take a more active role in their health care through a personalized exercise therapy and education program so that they may reduce symptoms of the individual conditions, increase quality of life and physical function and prevent development of other chronic conditions. Strong interdisciplinary collaboration involving many different scientific methodologies and a high degree of patient involvement throughout the entire research process are at the heart of the project to ensure relevance to the patients and the health care system and to make sure that the project is implementable in clinical practice afterwards. The MOBILIZE project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (grant agreement No 801790).*

<https://osf.io/qk6yg/>



Before we move on...

- Exercise Therapy works for people with single chronic conditions
- Exercise Therapy maybe works for people with 2 chronic conditions



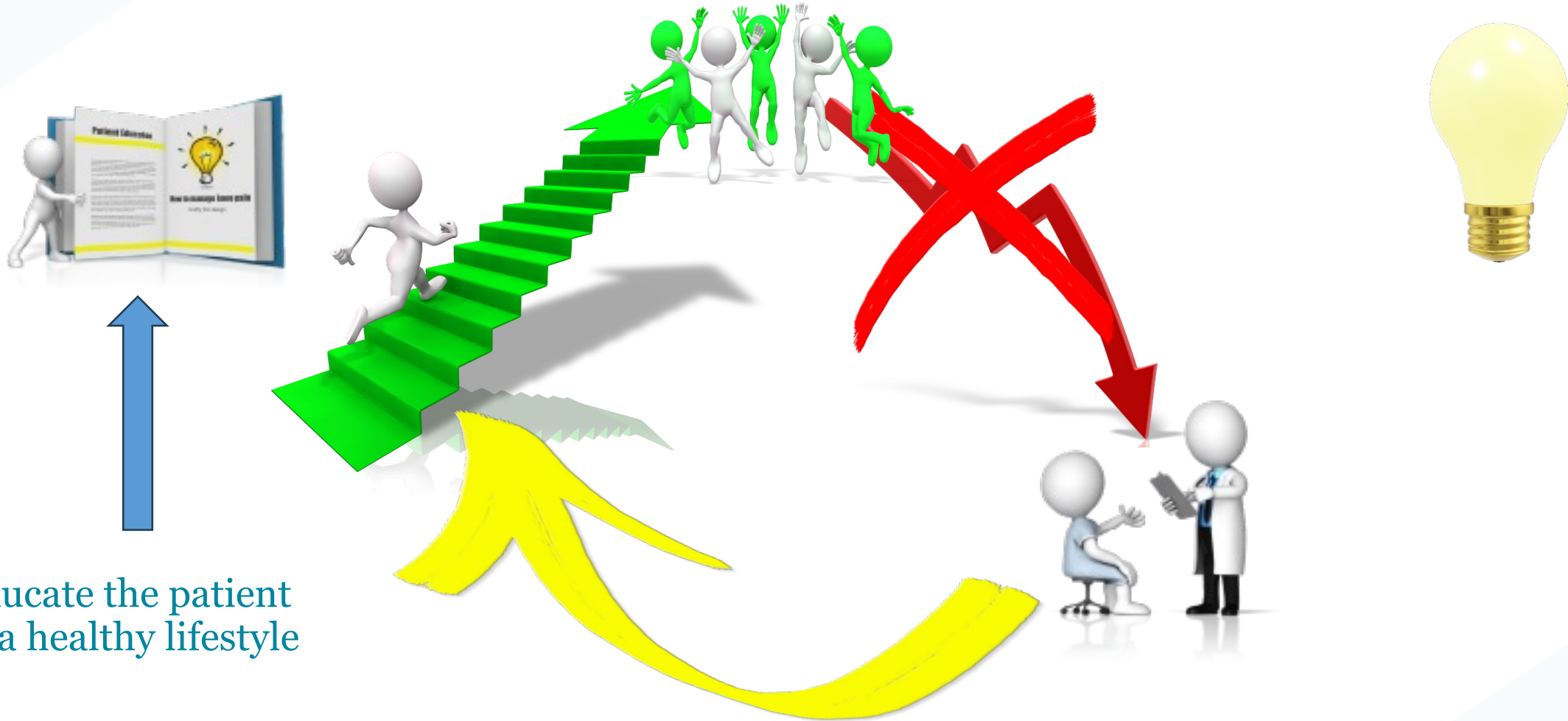
Wait a
moment.



Use it or lose it...



Self-management is more than important



Educate the patient
to a healthy lifestyle



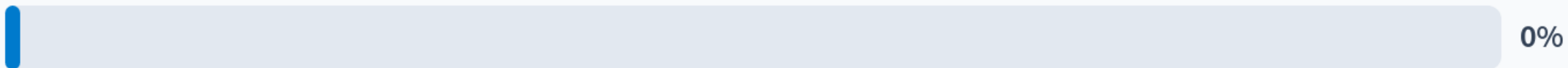


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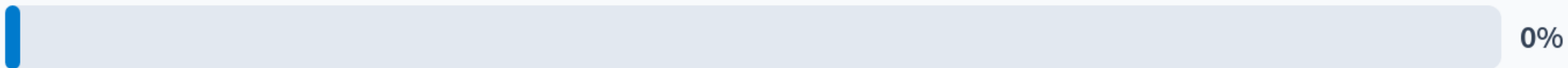
Is it your responsibility to educate the patient to a healthy lifestyle?

Yes



0%

No



0%

The 4 major pillars of health

- No Smoking
- Physical activity
- Healthy Diet
- No/Limited Alcohol consumption


Research

Lifestyle, social factors, and survival after age 75: population based study

BMJ 2012 ; 345 doi: <https://doi.org/10.1136/bmj.e5568>

Cite this as: *BMJ* 2012;345:e5568

Healthy lifestyle and life expectancy in people with multimorbidity in the UK Biobank: A longitudinal cohort study

Yogini V. Chudasama , Kamlesh Khunti, Clare L. Gillies, Nafeesa N. Dhalwani, Melanie J. Davies, Thomas Yates, Francesco Zaccardi

Research article | [Open Access](#) | [Published: 07 April 2014](#)

Lifestyle risk factors and residual life expectancy at age 40: a German cohort study

[Kuanrong Li](#) , [Anika Hüsing](#) & [Rudolf Kaaks](#)



[BMC Medicine](#) 12, Article number: 59 (2014) | [Cite this](#)

ARTICLES | VOLUME 391, ISSUE 10129, P1513-1523, APRIL 14, 2018

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Risk thresholds for alcohol consumption: combined analysis of individual-participant data for 599 912 current drinkers in 83 prospective studies

Angela M Wood, PhD ,  • Stephen Kaptoge, PhD • Adam S Butterworth, PhD • Peter Willeit, MD • Samantha Warnakula, PhD • Thomas Bolton, MMath • et al. [Show all authors](#) • [Show footnotes](#)



The 4 major pillars of health

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
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PHYSICAL ACTIVITY

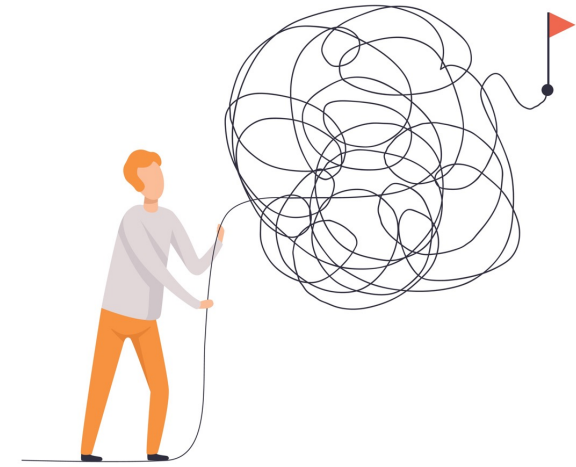
Any bodily movement that requires energy expenditure

EASY RIGHT?



PHYSICAL ACTIVITY

Any bodily movement that requires energy expenditure



BEHAVIOR



PHYSICAL ACTIVITY

Any bodily movement that requires energy expenditure



16000 to 17000
steps/day

5000 steps/day



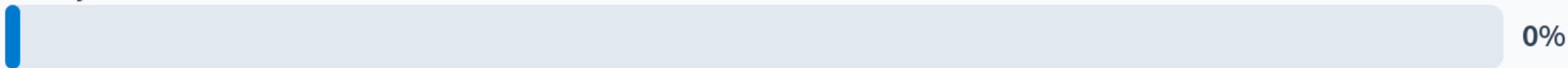


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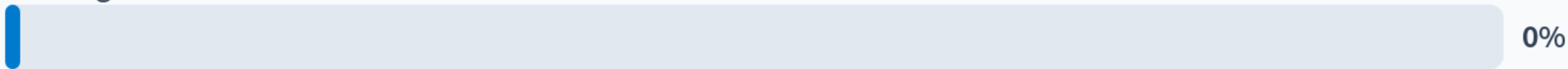


What is the new message of the latest WHO guidelines for physical activity

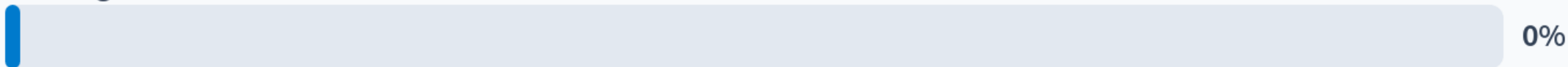
Every moves count



Moving is fun



Moving for better health



Physical activity

Any bodily movement that produces energy expenditure

EVERY MOVE COUNTS

Being active has significant health benefits for hearts, bodies and minds, whether you're walking, wheeling or cycling, dancing, doing sport or playing with your kids.

ARTICLES | VOLUME 11, ISSUE 1, E32-E39, JANUARY 2023 [Download Full Issue](#) PDF [920]

The cost of inaction on physical inactivity to public health-care systems: a population-attributable fraction analysis

Andreia Costa Santos, PhD • Juana Willumsen, PhD • Filip Meheus, PhD • Andre Ilbawi, MD • Fiona C Bull, PhD

[Open Access](#) • Published: December 05, 2022 • DOI: [https://doi.org/10.1016/S2214-109X\(22\)00464-8](https://doi.org/10.1016/S2214-109X(22)00464-8)



500 million new cases of non-communicable diseases (such as cardiovascular diseases, cancer, diabetes and chronic respiratory diseases) could be avoided by 2030.

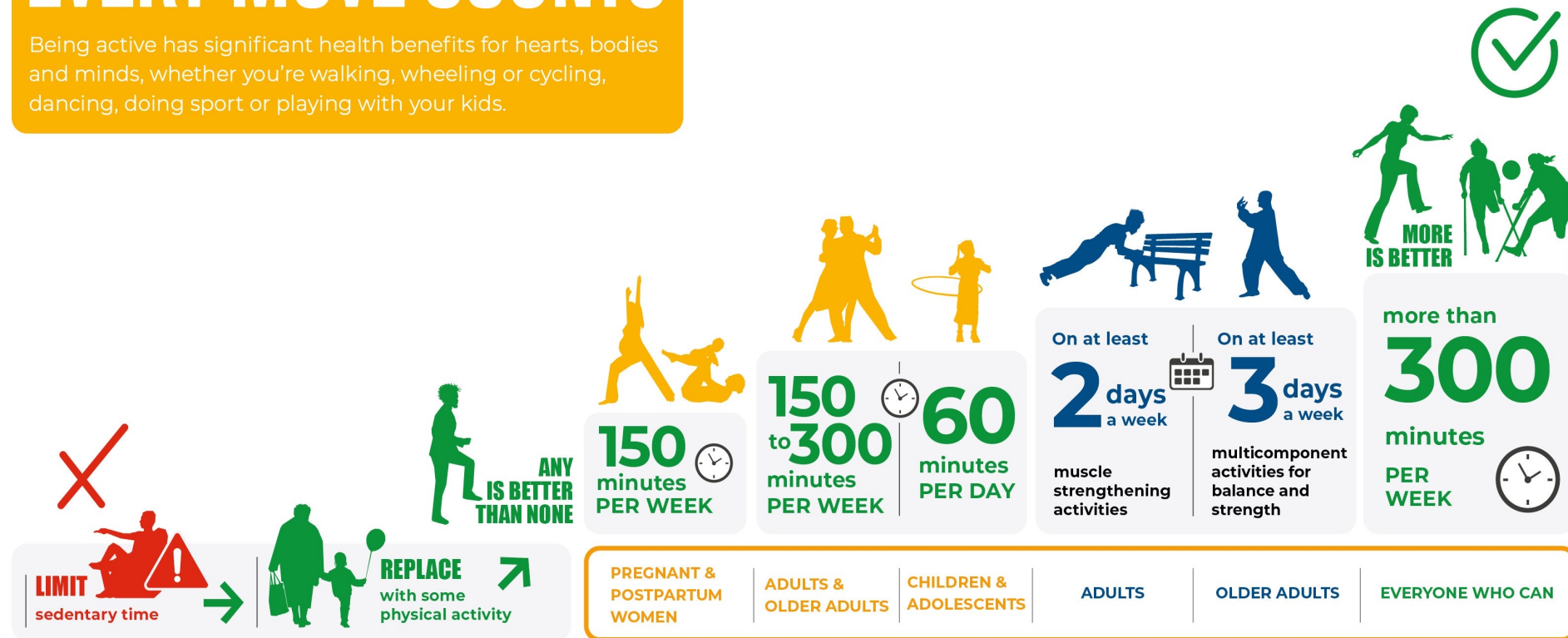


Physical activity

Any bodily movement that produces energy expenditure

EVERY MOVE COUNTS

Being active has significant health benefits for hearts, bodies and minds, whether you're walking, wheeling or cycling, dancing, doing sport or playing with your kids.



What can you do in
practice?

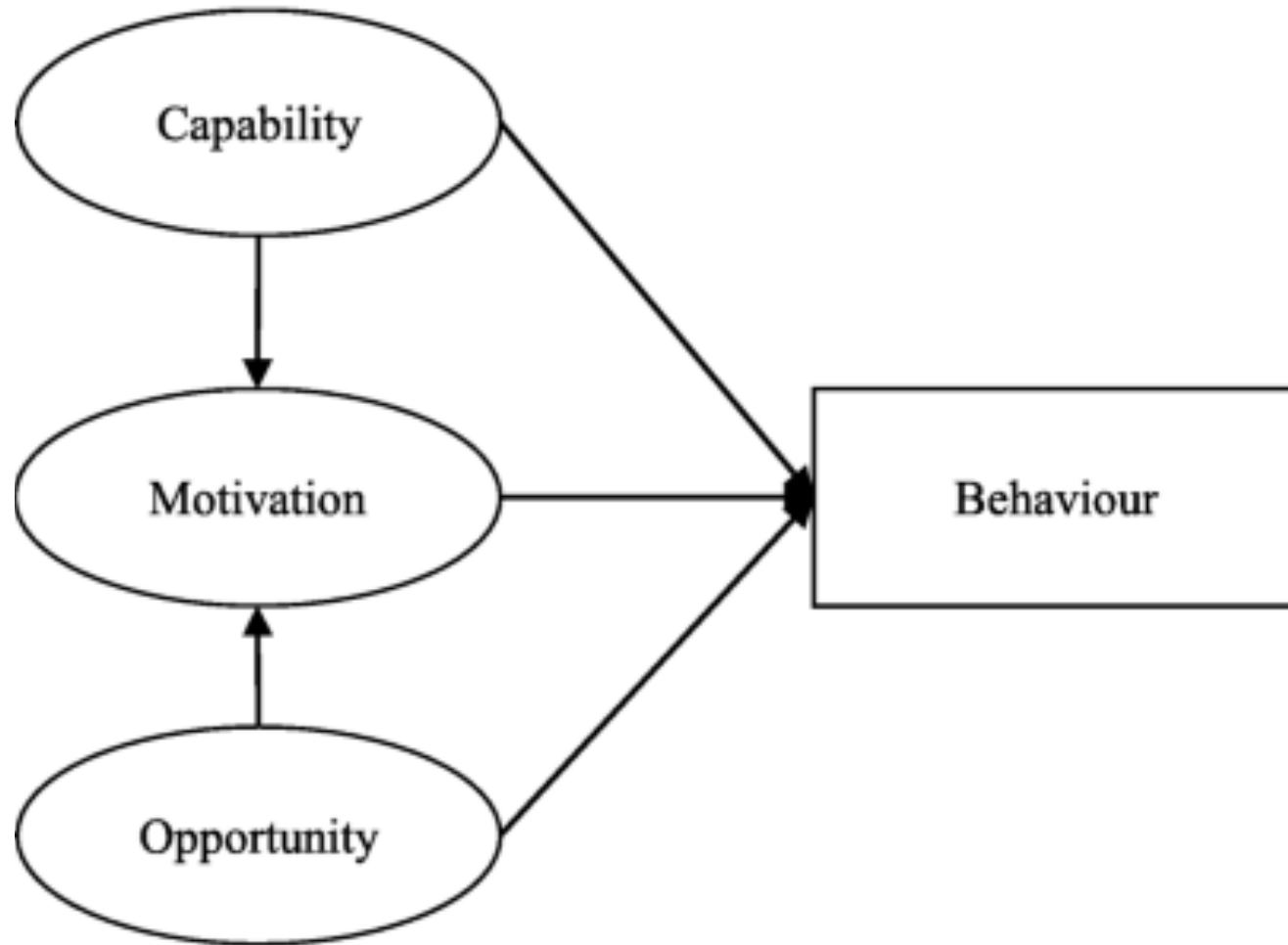


Solution n. 1



COM-B

- Has the person the capability to perform PA?
- Motivate and keep motivating the patient to be physically active
- Provide opportunities for being physically active



The strategies to prioritise

BCT	Examples
Goal setting (outcome)	Set or agree on a goal defined in terms of a positive outcome of wanted behaviour
Action planning	Prompt detailed planning of performance of the behaviour (must include at least one of context, frequency, duration and intensity)
Problem solving	Prompt the patient to identify barriers preventing them from starting a new exercise regime e.g., lack of motivation, and discuss ways in which they could help overcome them e.g., going to the gym with a buddy
Self-monitoring of behavior	Ask the person to weigh themselves at the end of each day, over a two week period, and record their daily weight on a graph to increase physical activity behaviors

Michie, S., Abraham, C., Whittington, C., McAteer, J., & Gupta, S. (2009). Effective techniques in healthy eating and physical activity interventions: a meta-regression. *Health psychology : official journal of the Division of Health Psychology, American Psychological Association*, 28(6), 690–701. <https://doi.org/10.1037/a0016136>



Solution n. 2



Consider digital solutions

Published on 6.7.2023 in Vol 25 (2023)

✦ Preprints (earlier versions) of this paper are available at <https://preprints.jmir.org/preprint/46439>, first published February 12, 2023.



Benefits and Harms of Digital Health Interventions Promoting Physical Activity in People With Chronic Conditions: Systematic Review and Meta-Analysis

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Blog | British Journal of
Sports Medicine

Can digital health help solve the global pandemic of physical inactivity and chronic conditions?

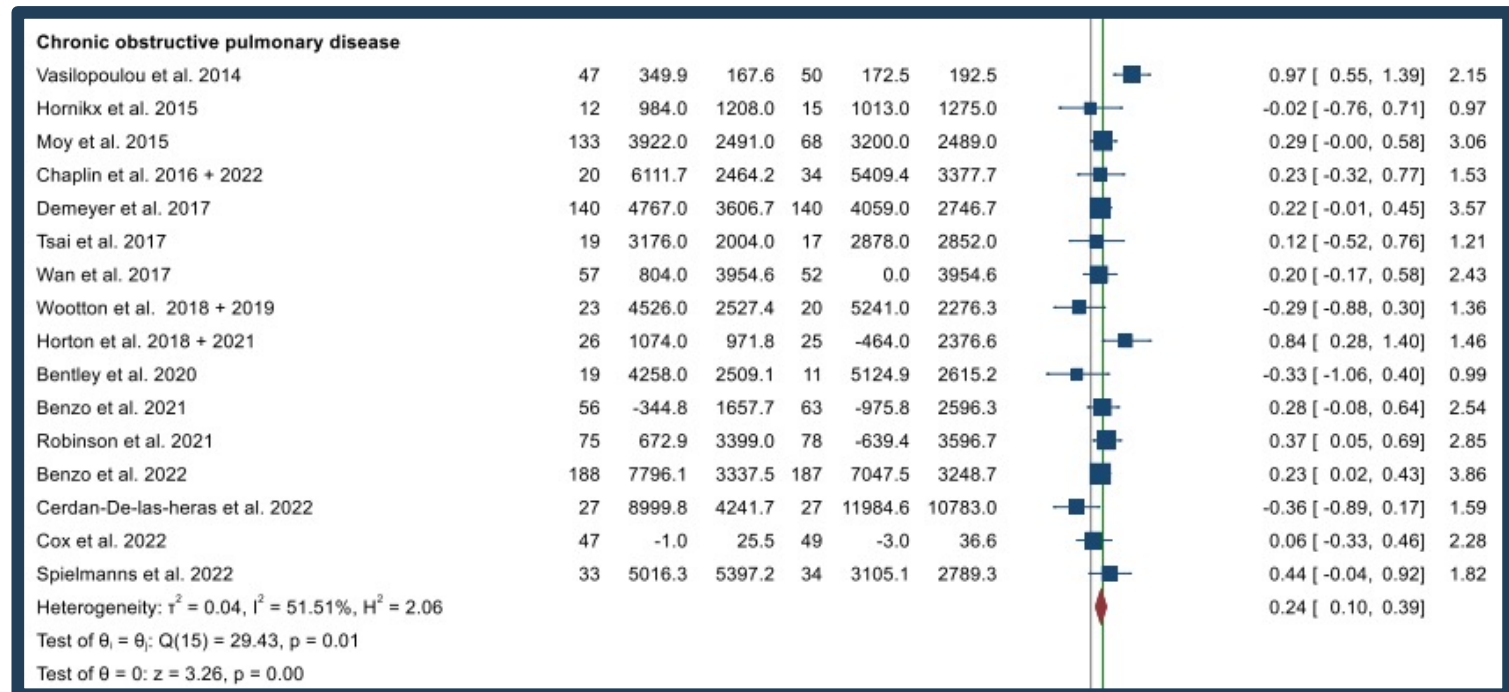
Posted on September 4, 2023 by [chloewilliamson](#)

Unveiling the pros and cons of digital health interventions for people with one or more chronic conditions

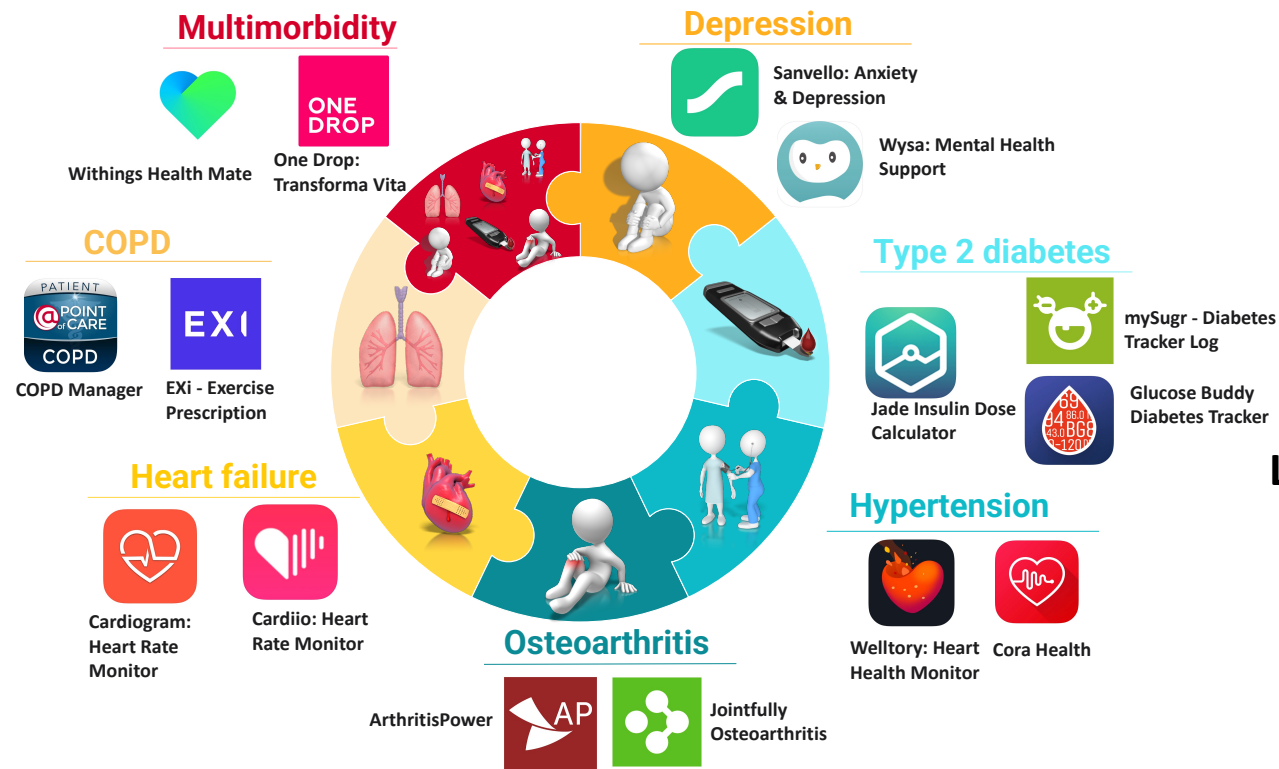


Effect of digital interventions to promote physical activity in people with COPD

Digital intervention promoted a small increase of objectively measured physical activity



Choose Apps that have a good layout and a high potential for behaviour change!



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The Quality of Health Apps and Their Potential to Promote Behavior Change in Patients With a Chronic Condition or Multimorbidity: Systematic Search in App Store and Google Play

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List of Apps in Multimedia Appendix of the paper

Multimedia Appendix 1

Supplementary tables and figures.

[DOCX File , 126 KB](#)



TAKE HOME MESSAGE

Physical activity, exercise and exercise therapy have different meanings

Exercise therapy is KEY in the management of chronic conditions

Help the patient to be physically active in their daily life by using specific strategies & digital solutions



Tak for jeres tid

Har du yderligere spørgsmål eller vil du samarbejde?

Kontakt

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