

Olahraga dan Kesehatan Mental

Daniella Satyasari

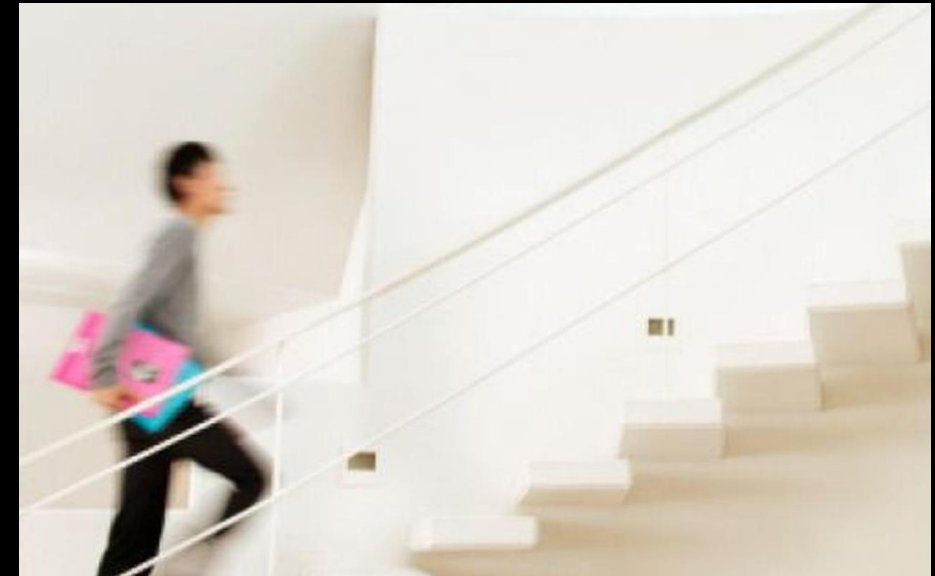
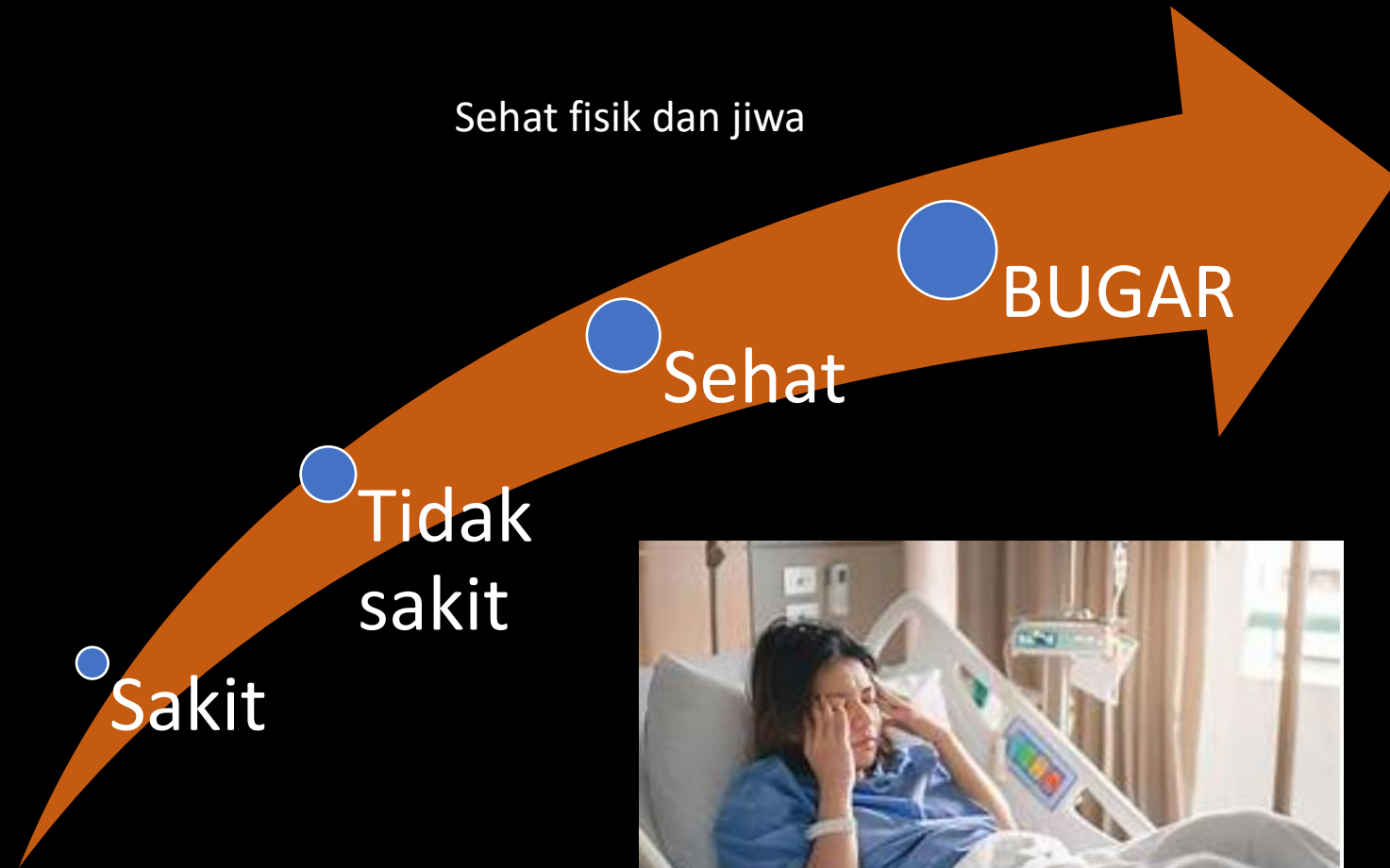


Kasus 1

- Seorang perempuan berusia 41 tahun, obesitas, sering GERD, migrain dan lemas.
- Tidak percaya diri akan penampilannya, mudah marah & tersinggung
- Pekerjaan terganggu, sulit fokus dan kadang pulang kerja setengah hari
- Kualitas hidup tidak baik

Apa itu kebugaran?

Sehat fisik dan jiwa



Penyakit terbanyak di Indonesia



Akar masalah:

GAYA HIDUP:

- Kebiasaan makan
- Pasif, mager
- ≠ olahraga

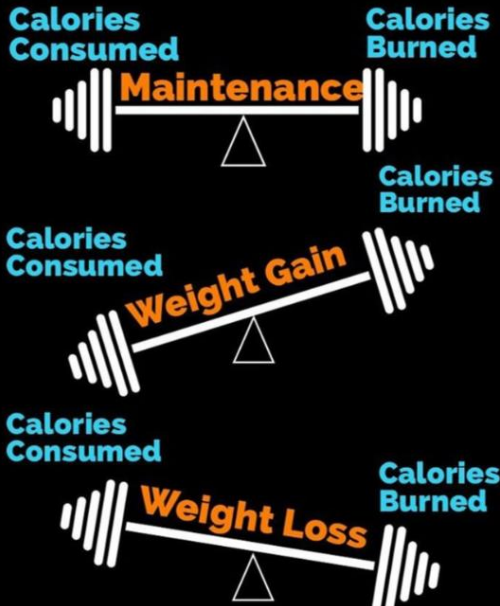
↓
Obesitas

Solusi

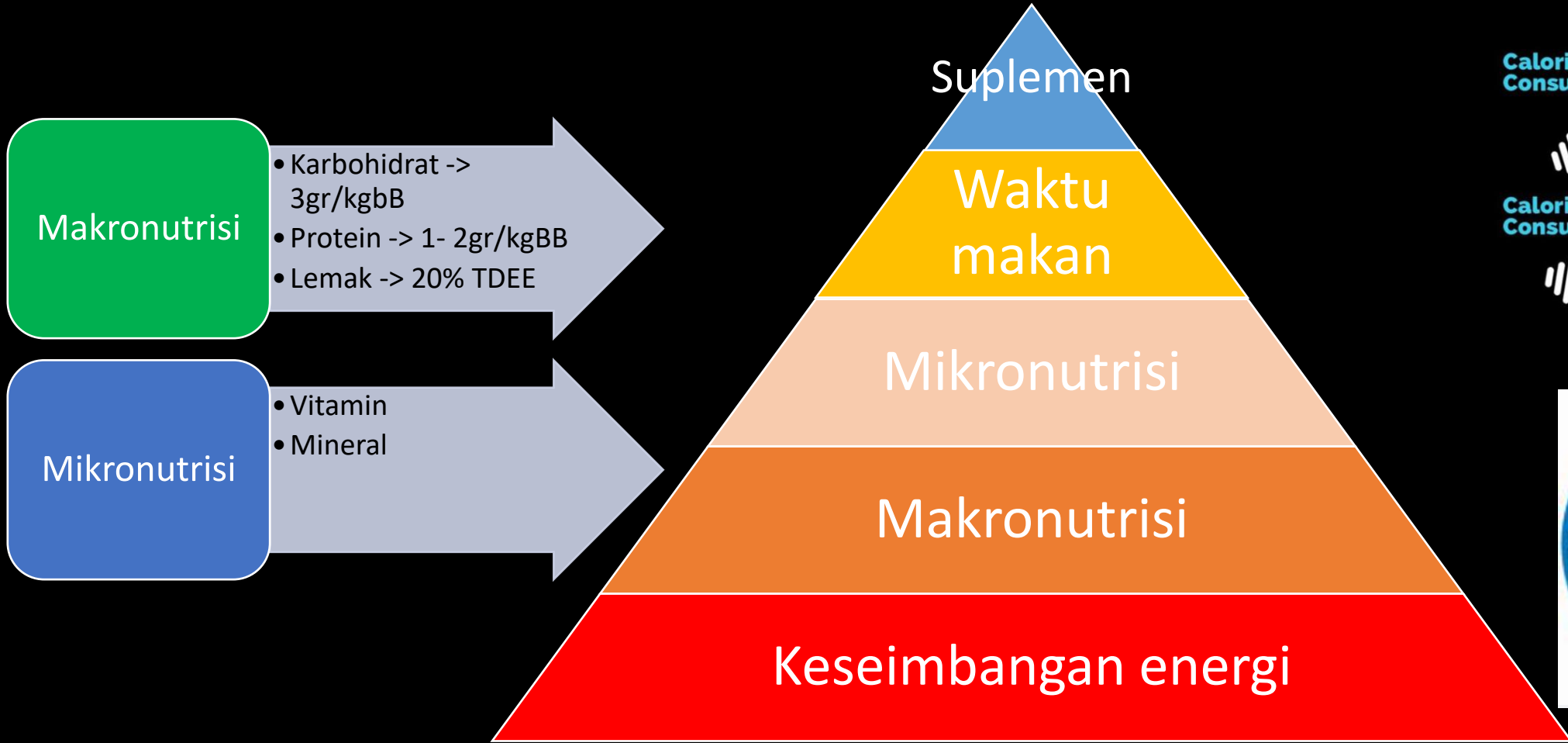
Perbaiki gaya hidup → kebiasaan >>



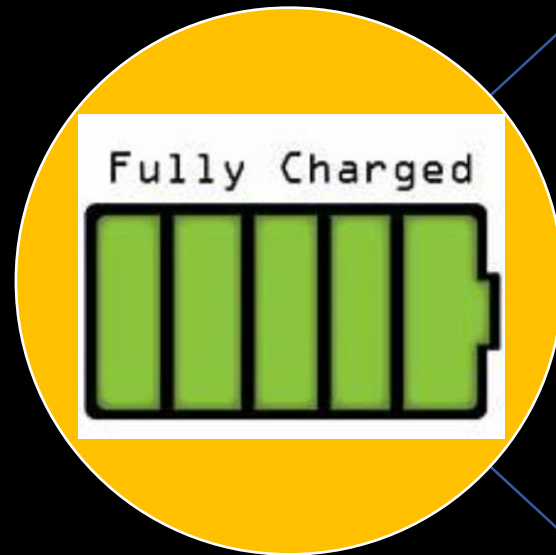
Energy BALANCE



DIET = GAYA HIDUP



Kenapa PERLU olahraga?



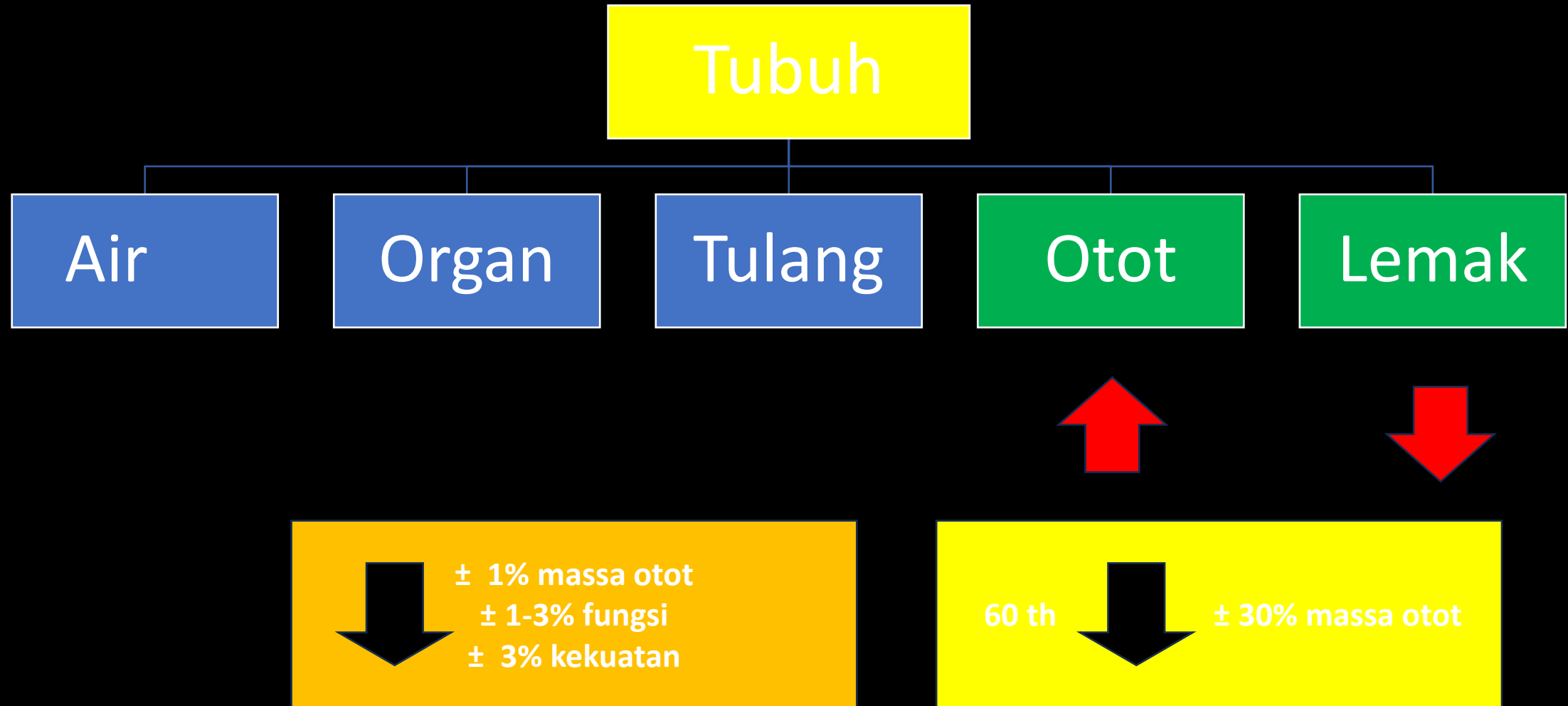
Olahraga & aktivitas fisik

Diet

Tidur, <stress

POLA HIDUP

Target?



Manfaat Olahraga



< Gula, TG, Kol, TD

< BB

Jantung paru

Postur

>> Tulang

Fleksibilitas & mobilitas

Imunitas

< Nyeri

Mandiri

Relaksasi

>> Mood

>> Konsentrasi,
memori

> PD

> Tidur

>> Target → makna

< dep, cemas

> Komunikasi

> Sosial

↑ QOL

The earlier,
the better

Research


Effect of exercise for depression: systematic review and network meta-analysis of randomised controlled trials

BMJ 2024 ; 384 doi: <https://doi.org/10.1136/bmj-2023-075847> (Published 14 February 2024)

Cite this as: *BMJ* 2024;384:e075847

Results 218 unique studies with a total of 495 arms and 14 170 participants were included. Compared with active controls (eg, usual care, placebo tablet), moderate reductions in depression were found for walking or jogging (n=1210, $\kappa=51$, Hedges' g -0.62 , 95% credible interval -0.80 to -0.45), yoga (n=1047, $\kappa=33$, g -0.55 , -0.73 to -0.36), strength training (n=643, $\kappa=22$, g -0.49 , -0.69 to -0.29), mixed aerobic exercises (n=1286, $\kappa=51$, g -0.43 , -0.61 to -0.24), and tai chi or qigong (n=343, $\kappa=12$, g -0.42 , -0.65 to -0.21). The effects of exercise were proportional to the intensity prescribed. Strength training and yoga appeared to be the most acceptable modalities. Results appeared robust to publication bias, but only one study met the Cochrane criteria for low risk of bias. As a result, confidence in accordance with CINeMA was low for walking or jogging and very low for other treatments.

Conclusions Exercise is an effective treatment for depression, with walking or jogging, yoga, and strength training more effective than other exercises, particularly when intense. Yoga and strength training were well tolerated compared with other treatments. Exercise appeared equally effective for people with and without comorbidities and with different baseline levels of depression. To mitigate expectancy effects, future studies could aim to blind participants and staff. These forms of exercise could be considered alongside psychotherapy and antidepressants as core treatments for depression.

► *Front Psychiatry*. 2019 Jan 10;9:762. doi: [10.3389/fpsyt.2018.00762](https://doi.org/10.3389/fpsyt.2018.00762) 

Physical Exercise in Major Depression: Reducing the Mortality Gap While Improving Clinical Outcomes

Abstract

Major depression shortens life while the effectiveness of frontline treatments remains modest. Exercise has been shown to be effective both in reducing mortality and in treating symptoms of major depression, but it is still underutilized in clinical practice, possibly due to prevalent misperceptions. For instance, a common misperception is that exercise is beneficial for depression mostly because of its positive effects on the body (“from the neck down”), whereas its effectiveness in treating core features of depression (“from the neck up”) is underappreciated. Other long-held misperceptions are that patients suffering from depression will not engage in exercise even if physicians prescribe it, and that only vigorous exercise is effective. Lastly, a false assumption is that exercise may be more harmful than beneficial in old age, and therefore should only be recommended to younger patients. This narrative review summarizes relevant literature to address the aforementioned misperceptions and to provide practical recommendations for prescribing exercise to individuals with major depression.

Is exercise a viable therapy for anxiety? Systematic review of recent literature and critical analysis

Gregory L. Stonerock, Rahul P. Gupta, James A. Blumenthal  

Abstract

Objectives

Exercise has been promoted as a treatment for a variety of psychiatric conditions. The benefits of exercise for depression are widely recognized, but the benefits of exercise for anxiety are uncertain. Although several reviews promoted exercise as a treatment for anxiety, concerns about the quality of studies prompted us to provide a critical review of the recent literature to re-assess the value of exercise for treating anxiety.

Methods and materials

We conducted a systematic review of all peer-reviewed randomized clinical trials (RCTs) among adults, published between January 2014 and December 2021, with an exercise intervention and anxiety as the a priori primary outcome. Two reviewers independently extracted data from studies meeting inclusion criteria, including sample characteristics, exercise intervention, control conditions, primary anxiety measure, relevant findings, and methodological quality quantified by PEDro scores.

Results

7240 published studies from CINAHL, EMBASE, MEDLINE, and PsycINFO were screened in April 2022, with 1831 participants across 25 eligible RCTs, of which 13 included elevated anxiety at study entry as an eligibility criterion. Only two of these 13 studies, and five of 12 studies of non-anxious individuals, found anxiety to be reduced unequivocally with exercise. Most studies suffered from significant methodological limitations including concurrent therapies and lack of intention-to-treat analyses.

The anxiolytic effects of resistance exercise


[Justin C Strickland](#)¹, [Mark A Smith](#)^{1,*}

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PMCID: PMC4090891 PMID: [25071694](#)

Abstract

Numerous studies have revealed the beneficial effects of regular exercise across a variety of mental health measures. Although a great deal of attention has been paid to the role of aerobic exercise, less is known about the role of resistance exercise (i.e., strength training) in mental health outcomes. Resistance exercise includes a broad group of procedures that evoke repeated muscle action against resistances above those encountered in daily life. A growing body of literature has identified anxiolytic effects of resistance exercise in human populations after both single-bout sessions and long-term training. This research has shown that resistance training at a low-to-moderate intensity (<70% 1 repetition maximum) produces the most reliable and robust decreases in anxiety. Importantly, anxiolytic effects have been observed across a diverse range of populations and dependent measures. These findings provide support for the use of resistance exercise in the clinical management of anxiety.

► [J Prev Med Public Health](#). 2013 Jan 30;46(Suppl 1):S12–S21. doi: [10.3961/jpmph.2013.46.S.S12](https://doi.org/10.3961/jpmph.2013.46.S.S12) 

Exercise and Physical Activity in Mental Disorders: Clinical and Experimental Evidence

[Elisabeth Zschucke](#)¹, [Katharina Gaudlitz](#)¹, [Andreas Ströhle](#)¹, 

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PMCID: PMC3567313 PMID: [23412549](#)

Abstract

Several epidemiological studies have shown that exercise (EX) and physical activity (PA) can prevent or delay the onset of different mental disorders, and have therapeutic benefits when used as sole or adjunct treatment in mental disorders. This review summarizes studies that used EX interventions in patients with anxiety, affective, eating, and substance use disorders, as well as schizophrenia and dementia/mild cognitive impairment. Despite several decades of clinical evidence with EX interventions, controlled studies are sparse in most disorder groups. Preliminary evidence suggests that PA/EX can induce improvements in physical, subjective and disorder-specific clinical outcomes. Potential mechanisms of action are discussed, as well as implications for psychiatric research and practice.

The Role of Exercise in Management of Mental Health Disorders: An Integrative Review

Patrick J. Smith^{1,2,3}, and Rhonda M. Merwin¹

[View Affiliations](#)

ABSTRACT

A large and growing body of evidence suggests that physical activity (PA) may hold therapeutic promise in the management of mental health disorders. Most evidence linking PA to mental health outcomes has focused on the effects of aerobic exercise training on depression, although a growing body of work supports the efficacy of both aerobic and resistance exercise paradigms in the treatment of anxiety and post-traumatic stress disorder. Despite abundant evidence linking PA and mental health, use of exercise training as a mental health treatment remains limited due to three important sources of uncertainty: (a) large individual differences in response to exercise treatment within multiple mental health domains; (b) the critical importance of sustained PA engagement, not always achieved, for therapeutic benefit; and (c) disagreement regarding the relative importance of putative therapeutic mechanisms. Our review of treatment data on exercise interventions and mental health outcomes focuses primarily on depression and anxiety within a health neuroscience framework. Within this conceptual framework, neurobiological and behavioral mechanisms may have additive or synergistic influences on key cognitive and behavioral processes that influence mental health outcomes. We therefore highlight sources of treatment heterogeneity by integrating the critical influences of (a) neurobiological mechanisms enhancing neuroplasticity and (b) behavioral learning of self-regulatory skills. Understanding the interrelationships between dynamic neurobiological and behavioral mechanisms may help inform personalized mental health treatments and clarify why, and for whom, exercise improves mental health outcomes. The review concludes with recommendations for future studies leveraging individual differences to refine treatment approaches to optimize mental health benefits.

Effect of Aerobic Versus Anaerobic Exercise on Quality of Life in Stroke Patients

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(b): Mahmoud Y. Elzanaty, Mai M. Gamal, Gehan M. Ahmed, Amira M. Abdel Rahman, Rania M. Tawfik (2021). *Effect of Aerobic Versus Anaerobic Exercise on Quality of Life in Stroke Patients. International Journal of Human Movement and Sports Sciences*, 9(6), 1362 - 1370. DOI: 10.13189/saj.2021.090632.

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Abstract Background: Stroke is one of the world's leading causes of death and long-term lack of ability. Objectives: This study aimed to test the effect of aerobic versus anaerobic exercise on stroke patients' quality of life. Methods: Thirty male patients with stroke enrolled in this study. The patients were divided into three groups at random: two research groups (GA) and (GB) and one

compared with that of control group (GC) after therapy. However, there was no significant difference between groups in role limitations due to physical health and role limitations due to emotional problems. There was no meaningful difference in the quality of life items within groups (GA), (GB) after therapy. Conclusion: Eight weeks of training revealed non-significant difference between

Kasus 1

- Perempuan berusia 41 tahun, obesitas, sering GERD, migrain dan lemas.
- Tidak percaya diri akan penampilannya, mudah marah & tersinggung
- Pekerjaan terganggu, sulit fokus dan kadang pulang kerja setengah hari
- Kualitas hidup tidak baik

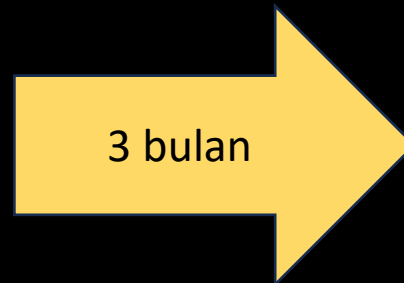


- BB turun 10 kg, lemak turun 6%, otot naik 4 %
- Gak GERD, migrain, dan fit. Jalan tidak engap
- Kerja produktif
- Kualitas hidup √

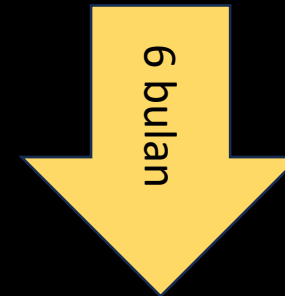
Kasus 2

- Seorang perempuan berusia 29 tahun, dengan **obesitas dan gangguan panik**, tidak pernah berolahraga, tidak jaga makan
- Cemas berlebihan, berdebar, sesak nafas spt akan mati bila ada pencetus 3-5x/bulan
- Pekerjaan terganggu, sulit fokus.
- **Kualitas hidup tidak baik**

Perubahan pola hidup



- Pengobatan
- Psikoterapi/konseling bertujuan



- Jalan 12.000/hr
 - WT 2x/minggu
 - Atur makan, bawa bekal
- Tingkatkan protein & serat



Contoh aktivitas fisik dan olahraga

- Jalan
- Bebersih rumah
- Memasak



- Jalan cepat >30 mnt
- Lari
- Sepedaan
- Berenang
- Yoga
- Pilates
- Tai chi
- dll



Angkat beban

3-4 x / minggu

2-4 x / minggu

Aktivitas fisik

Pentingnya **aktif gerak** → **PULUHAN MANFAAT**

1. **Jalan** -> KEMENKES 7500 Langkah/hr

→ setelah makan pagi, siang, malam @1000 → 3000

→ ke kantor, pulang kantor → 2000

→ + 2500 → Naik-turun tangga, ke warung, dll

2. **Cuci** motor, mobil

3. **Bebersih** rumah, berkebun

4. **Main** sama anak,eliharaan

Olahraga

F

- **Frekuensi** → 150 mnt kardio + 2x WT/minggu → 3-5x/minggu

I

- **Intensitas** → 75-85% optimal
- >>>> → jantung paru

T

- **Time** → singkat/sedang/panjang

T

- **Type** -> Aerobik, anaerobik

EFFORT		PURPOSE		
MAXIMUM INTENSITY	90-100%		COMPETITION AND MAXIMAL TESTING.	171-190
VIGOROUS INTENSITY	80-90%		IMPROVES ANAEROBIC AND AEROBIC FITNESS, INTERVAL TRAINING AND TEMPO TRAINING.	152-170
MODERATE INTENSITY	70-80%		IMPROVES AEROBIC FITNESS, CONTINUOUS, AND STEADY STATE TRAINING.	133-151
LIGHT INTENSITY	60-70%		BUILDS ENDURANCE AND LONG SLOW DISTANCE (LSD) TRAINING.	114-132
VERY LIGHT INTENSITY	50-60%		RECOVERY, WARMING UP AND COOLING DOWN.	95-113

220 – usia = 100%

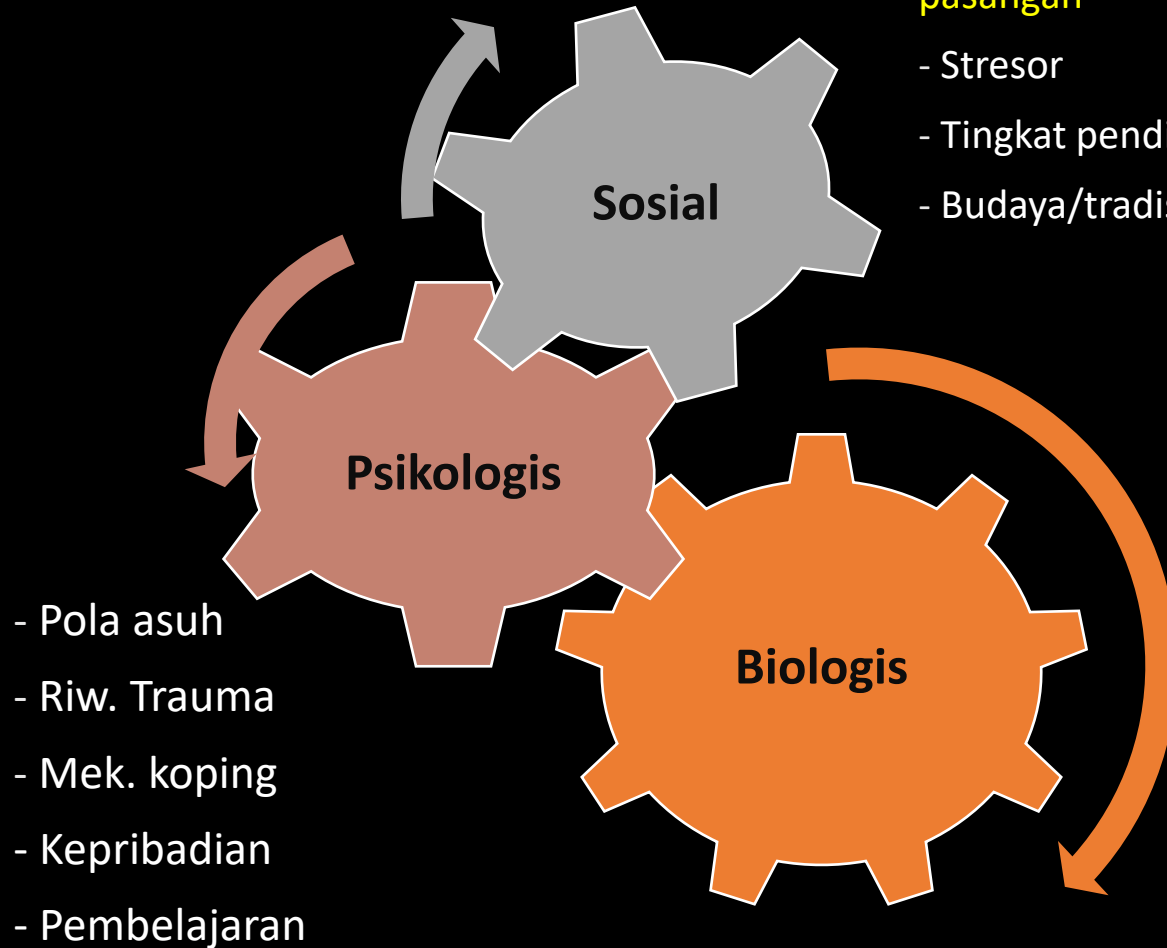
220 – 30 = 190 (100%)

Solusi

Perbaiki gaya hidup → kebiasaan >>



Pengelolaan stress



- Dukungan keluarga, teman, pasangan
- Stresor
- Tingkat pendidikan, sos-ek <<
- Budaya/tradisi



- Usia muda
- Narkoba
- Penyakit fisik tertentu
- Zat kimia



Tidur

Results


The mean age of the sample was 24.8 years \pm 4.5 years (w1). Students with shorter sleep durations, and to some degree longer sleep durations (illustrating a U-shaped association), exhibited a higher risk for all assessed mental disorders and well-being outcomes one year later, compared to students sleeping 8–9h. The U-shaped trend was consistent for both female and male students.

Conclusion

Sleep duration appears to be a transdiagnostic marker for mental health in young adults.



Sleep duration and mental health in young adults

Cecilie L. Vestergaard ^{a b}  , Jens C. Skogen ^{c d e}, Mari Hysing ^f, Allison G. Harvey ^g, Øystein Vedaa ^{a c}, Børge Sivertsen ^{c h}


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<https://doi.org/10.1016/j.sleep.2024.01.021> 

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Highlights

- The connection between sleep duration and mental health in young adults is U-shaped.
- Young adults sleeping <8h have the highest risk for mental illness.
- Young adults sleeping 8–9h have the lowest risk for mental illness.

Improving sleep quality leads to better mental health: A meta-analysis of randomised controlled trials

[Alexander J Scott](#)^{a,*}, [Thomas L Webb](#)^c, [Marrissa Martyn-St James](#)^b, [Georgina Rowse](#)^d, [Scott Weich](#)^b

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PMCID: PMC8651630 PMID: [34607184](#)

Summary

The extent to which sleep is causally related to mental health is unclear. One way to test the causal link is to evaluate the extent to which interventions that improve sleep quality also improve mental health. We conducted a meta-analysis of randomised controlled trials that reported the effects of an intervention that improved sleep on composite mental health, as well as on seven specific mental health difficulties. 65 trials comprising 72 interventions and $N = 8608$ participants were included. Improving sleep led to a significant medium-sized effect on composite mental health ($g+ = -0.53$), depression ($g+ = -0.63$), anxiety ($g+ = -0.51$), and rumination ($g+ = -0.49$), as well as significant small-to-medium sized effects on stress ($g+ = -0.42$), and finally small significant effects on positive psychosis symptoms ($g+ = -0.26$). We also found a dose response relationship, in that greater improvements in sleep quality led to greater improvements in mental health. Our findings suggest that sleep is causally related to the experience of mental health difficulties. Future research might consider how interventions that improve sleep could be incorporated into mental health services, as well as the mechanisms of action that explain how sleep exerts an effect on mental health.



Effects of exercise on sleep quality in general population: Meta-analysis and systematic review

Xiaojie Zhou ^a, Yan Kong ^a, Beibei Yu ^a, Shengnan Shi ^a, Hui He ^b  

Results

A total of 7494 studies were retrieved, and 81 eligible randomized controlled trials involving 6193 subjects were finally included. The primary outcome metrics included subjective sleep quality (PSQI), and the secondary outcome was objective sleep efficiency (SE), of which 65 reported PSQI and 23 reported SE. The results of paired meta-analysis showed that exercise significantly decreased PSQI [MD=-1.77, (95% CI=-2.28,-1.25),P<0.05] and increased SE [MD=4.81, (95% CI=2.89,6.73),P<0.05]. The results of the network meta-analysis showed that body and mind exercise [MD=-2.28, (95% CI=-3.19,-1.36),P<0.05, SUCRA=85.6] may be the best exercise to improve PSQI, and aerobic exercise [MD=5.02, (95% CI=2.52,7.52),P<0.05, SUCRA=75.1] is most likely to be the best type of exercise to improve SE. In regression analyses, there was a moderating effect of exercise cycle ($\beta=-0.25$ [0.40, 0.46], SE=0.10 [P=0.015, R²=0.24]) and age ($\beta=-0.20$ [-0.04, -0.01, SE=-2.06 [P=0.039,R²=0.16]) as moderators of objective sleep efficiency.

Conclusion

Exercise is effective in improving both subjective and objective sleep quality. Body and mind exercise, aerobic exercise, and aerobic combined with resistance exercise may be the preferred way to improve sleep, and the longer the exercise cycle, the more obvious the improvement in sleep effect, the improvement effect will gradually decrease with age.

The effect of physical activity on sleep quality: a systematic review

Feifei Wang   & Szilvia Boros 

Pages 11-18 | Received 04 Jan 2019, Accepted 19 May 2019, Published online: 24 Jun 2019

 Cite this article  <https://doi.org/10.1080/21679169.2019.1623314>



Aim

This systematic review aims to examine the effect PA intensity on sleep quality in healthy populations.

Methods

We conducted a systematic review by searching latest 8 years publications. PubMed and Scopus were used to identify eligible studies with the searching terms, 'sleep quality' AND 'physical activity', within the timeframe between January 2010 and June 2018. All the included articles were systematically reviewed and analysed. The comparison of physical intensity and sleep quality was conducted based on the threshold of moderate PA and vigorous PA.

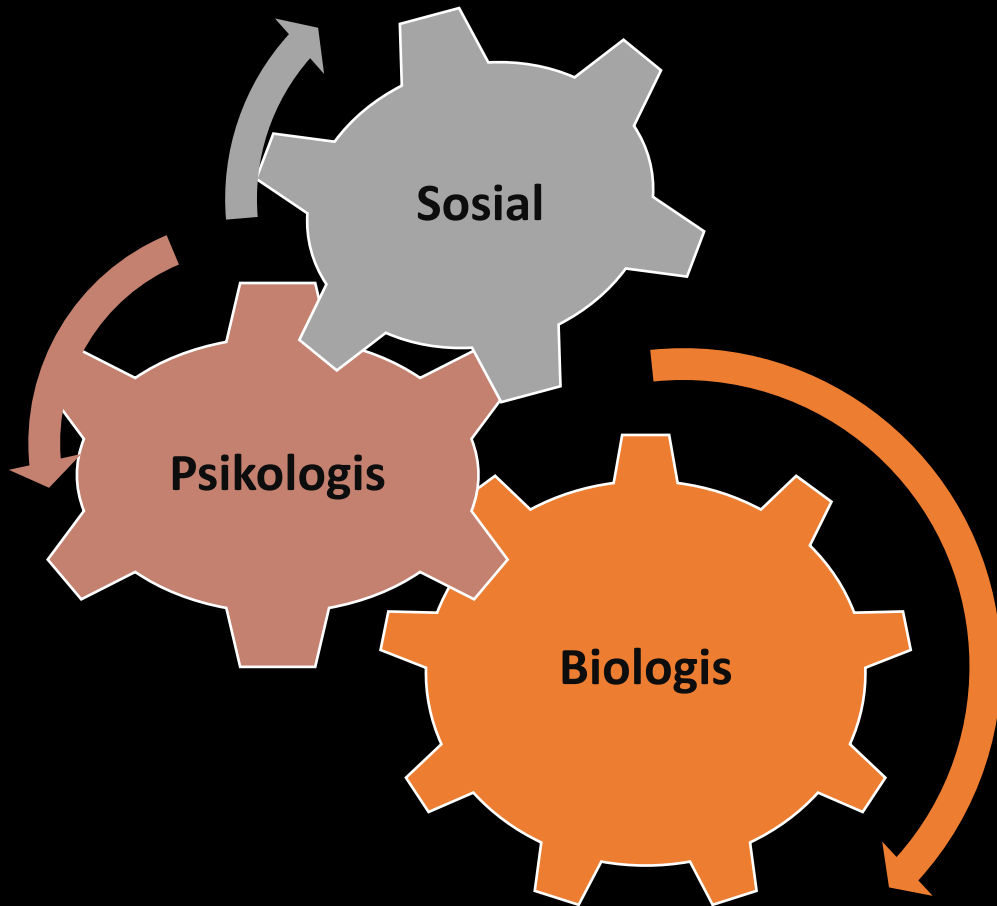
Results

Fourteen studies were included in the review. Analyses revealed that moderate PA seems to be more effective than vigorous activity in improving sleep quality. Furthermore, moderate physical exercise is beneficial to sleep quality in both young and old populations.

Conclusions

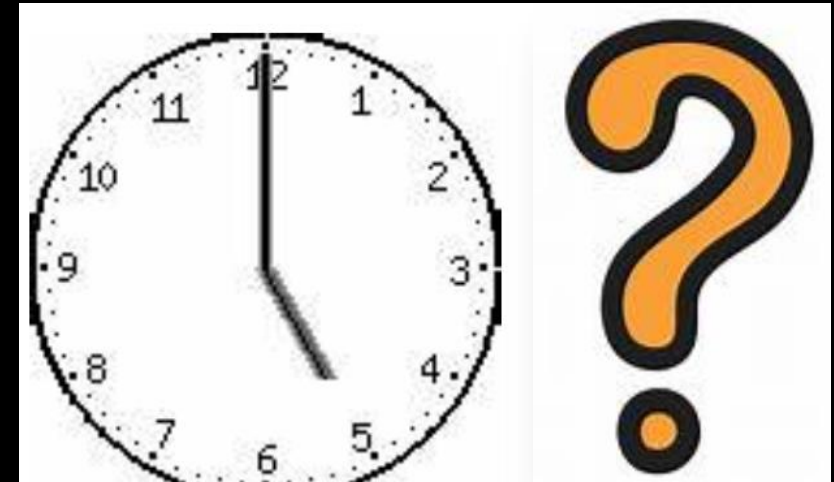
Moderate exercise showed more promising outcome on sleep quality than vigorous exercise. Future studies are suggested to elaborate detailed exercise suggestions by considering age groups in order to make accurate recommendations for health promotion.

Gangguan Tidur



Pemeriksaan

- Olahraga aerobik dan angkat beban
- Intensitas sedang
- Rutin



Individual / personalized

Kesehatan bukanlah segalanya, tetapi tanpa kesehatan, segalanya menjadi tidak berarti
- Arthur Schopenhauer-

If we don't use it, we lose it