

How to treat anything

Using **physical activity** as a treatment for chronic disease

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AUSTRALASIAN COLLEGE OF
SPORT AND EXERCISE PHYSICIANS

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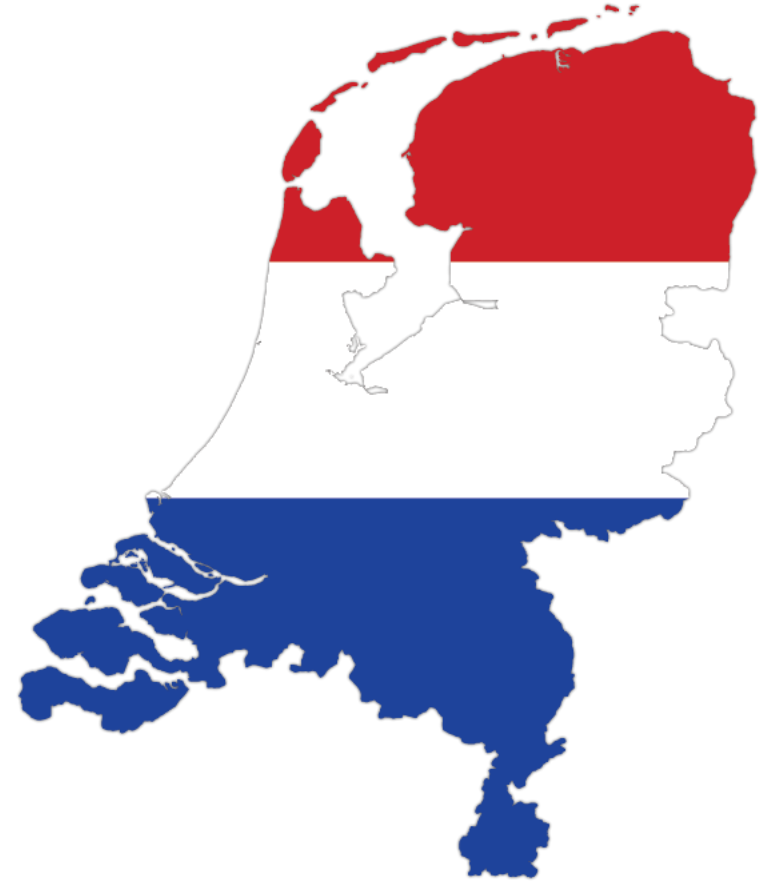
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MSK medicine

Oncology

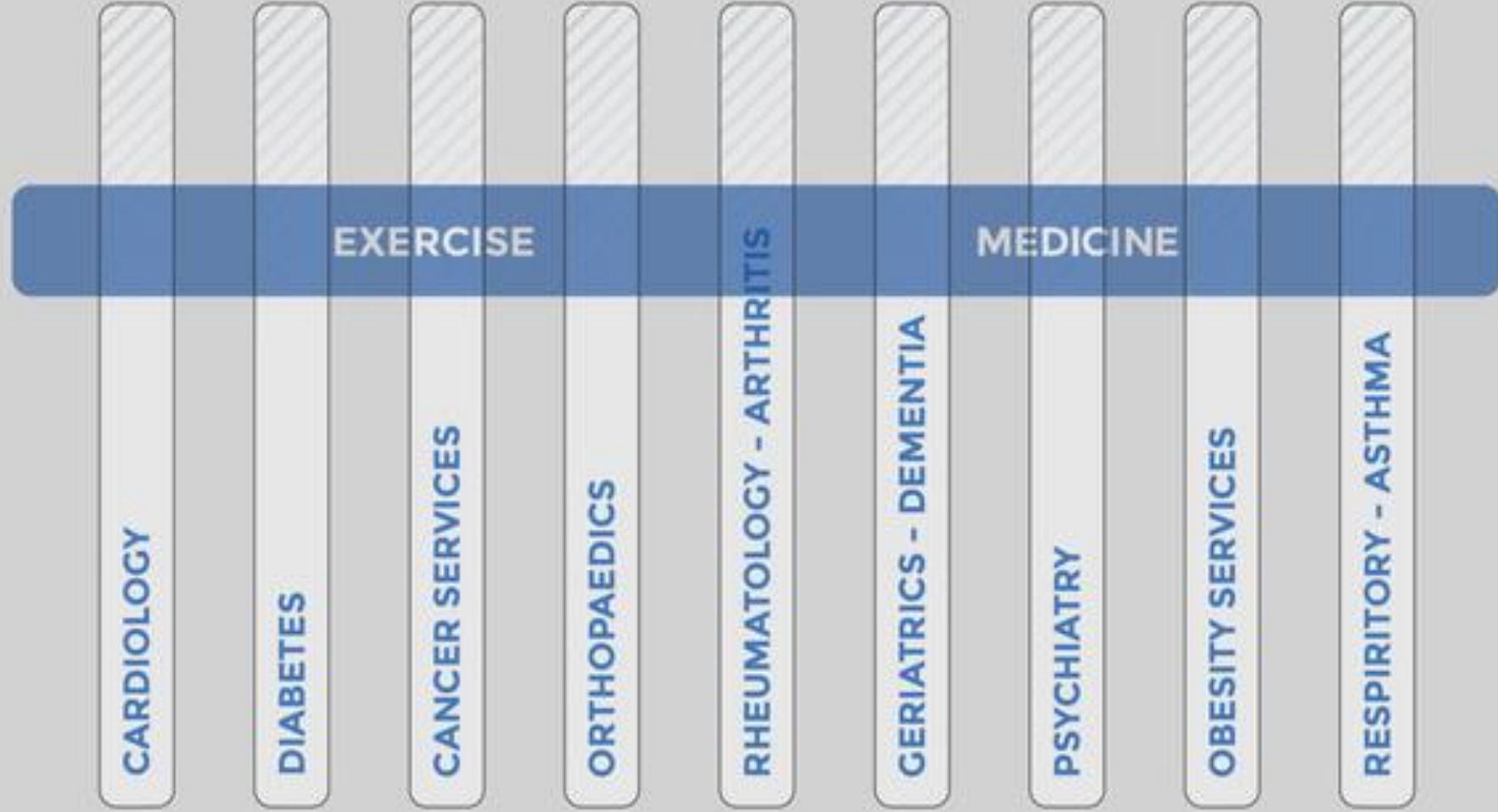
Cardiology



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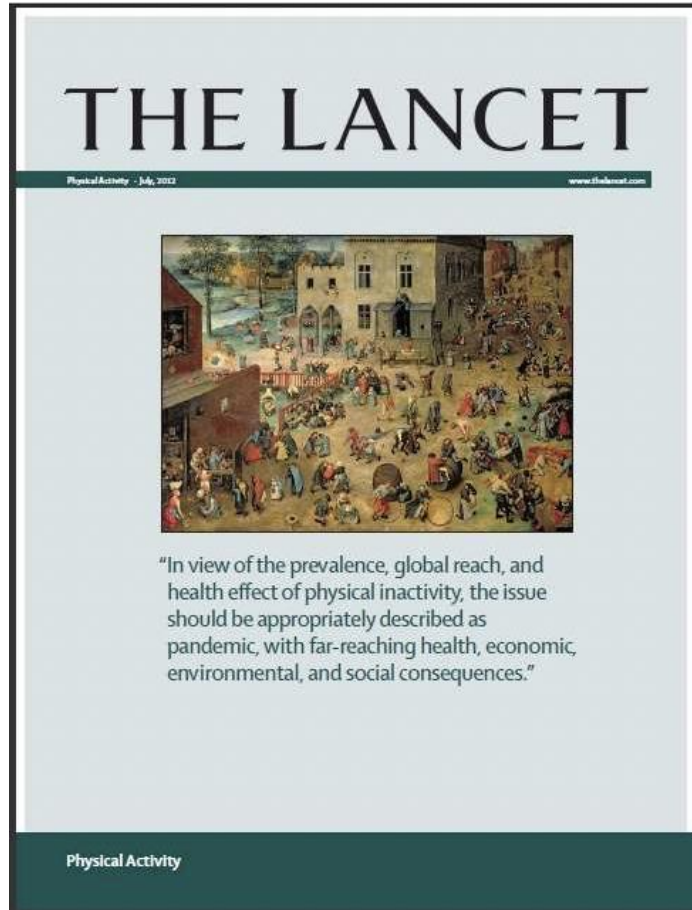
PLUS: PAEDIATRICS, WOMEN'S & MEN'S HEALTH



Dr Bob Sallis



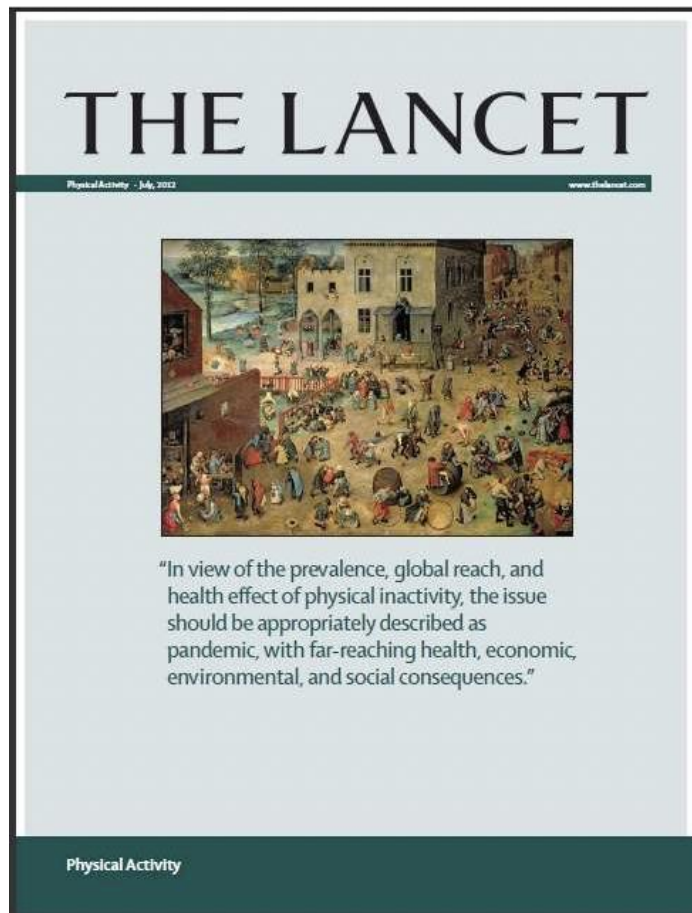
Physical inactivity



“In view of the prevalence, global reach and health effect of physical inactivity, the issue should be appropriately described as Pandemic, with far-reaching health, economic, environmental and social consequences.”



Physical inactivity



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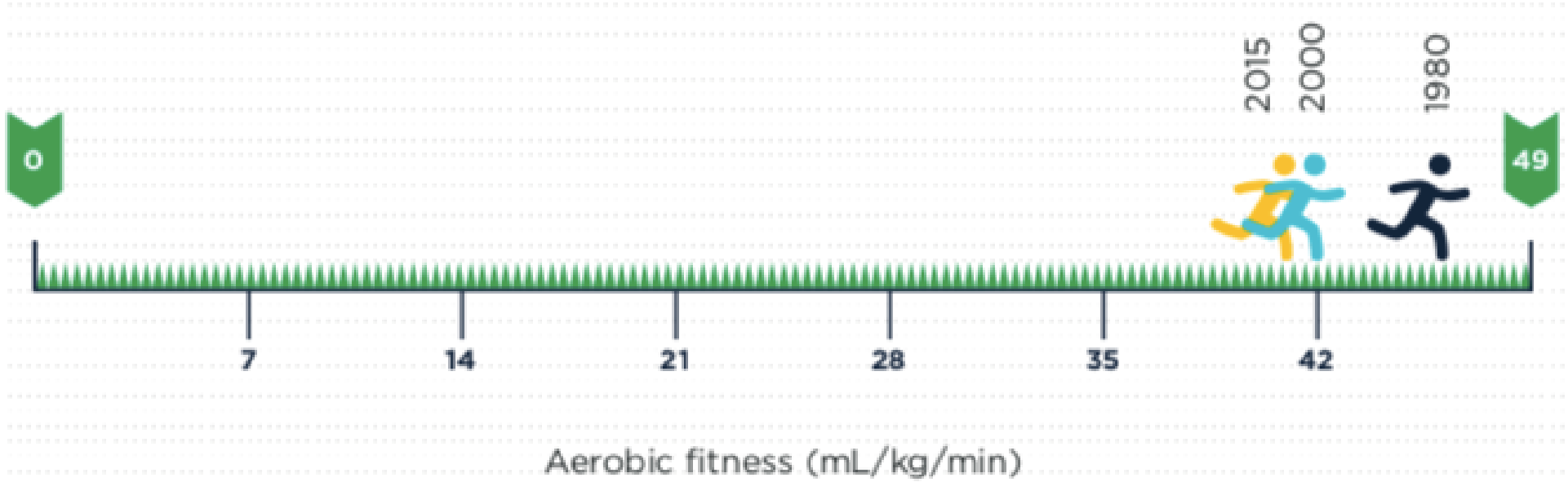
24 FITNESS

AERO

727

NO LOBBY

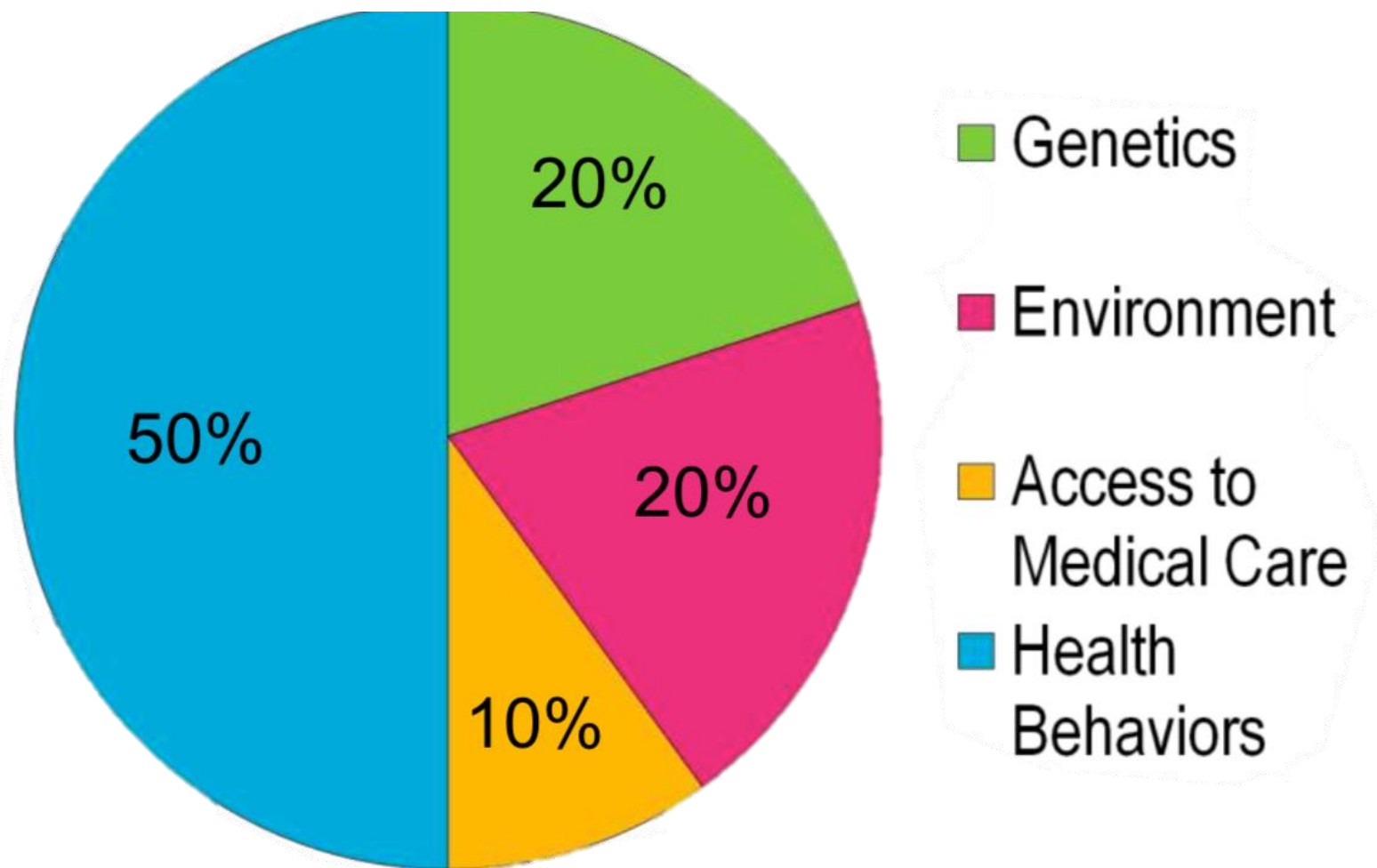
Research shows the average child in 2015 would finish 250 metres behind the average child from the 1980s over a 1.6km run¹⁹



(Australian National Sports Plan 2030)



Contributors to overall health status



(CDC, 2000)

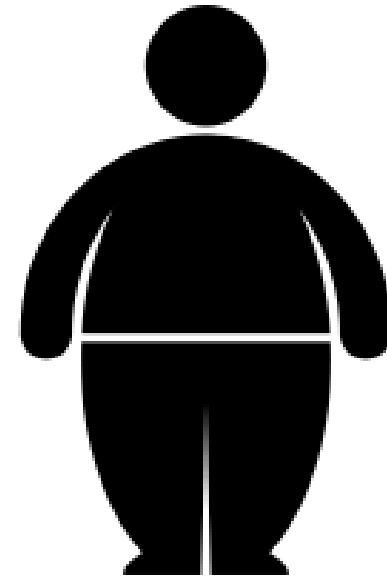
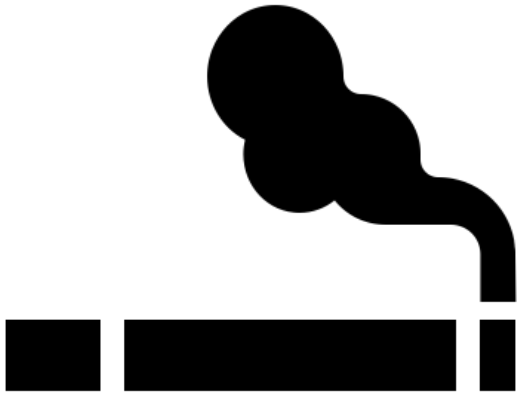


**Exercise is an effective
treatment?**



Smokadiabesity

(Blair, 2009)

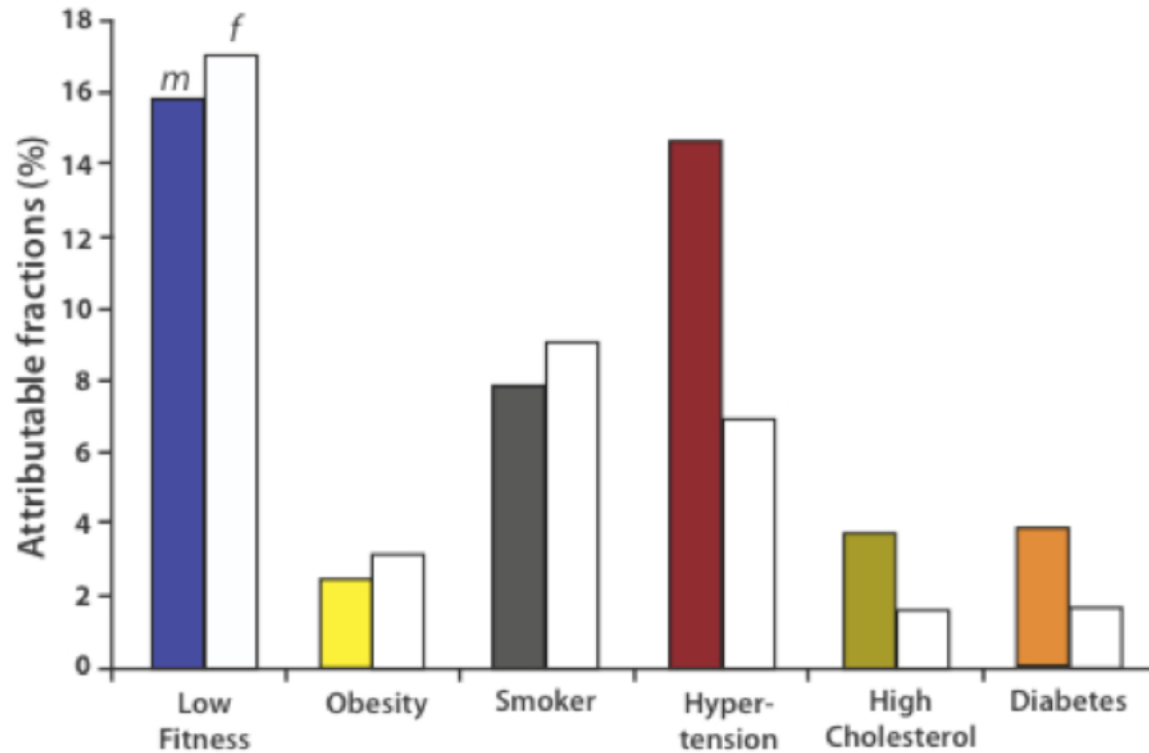


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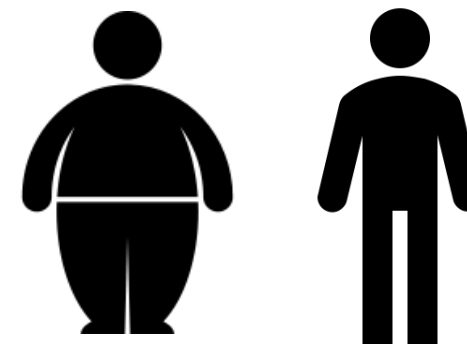
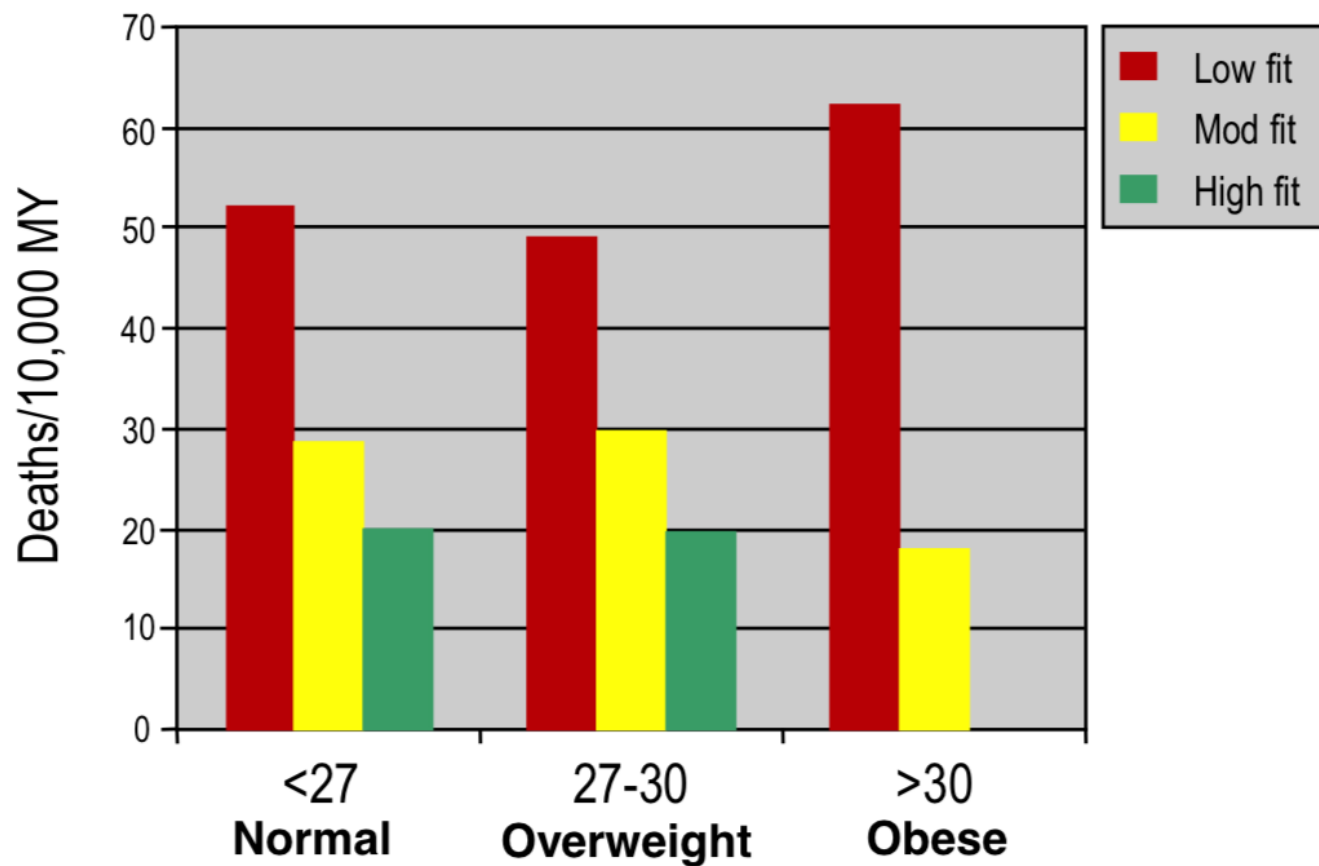
Smokadiabesity



“Low physical fitness is worse than pooled impact of smoking, diabetes and obesity”



Fitness vs fatness (Barlow, 1995)



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Body weight

Australian Institute of Health and Welfare (2016)

- Obesity constitutes 7% of disease burden
- 45% of OA disease burden
- Losing 3kg could reduce national disease burden by 14% by 2020



Australian Government

**Australian Institute of
Health and Welfare**

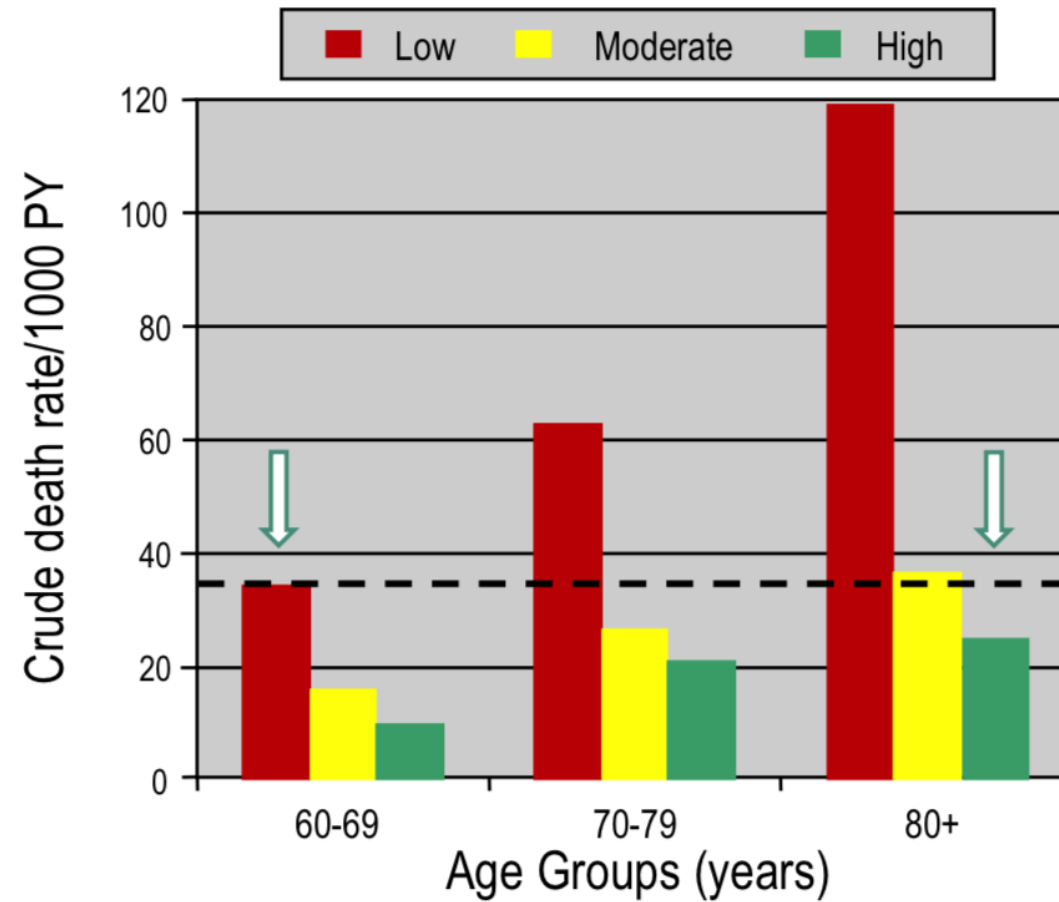
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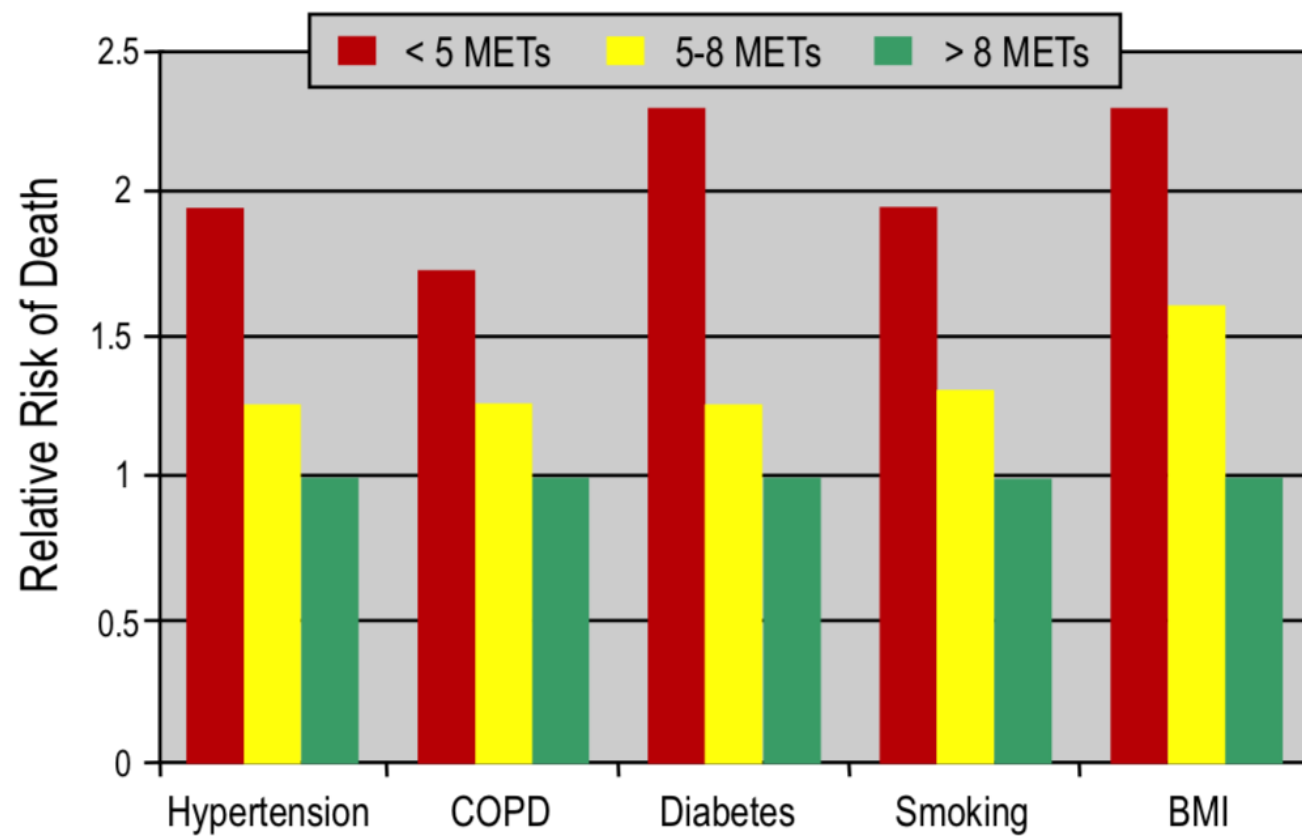


Older patients

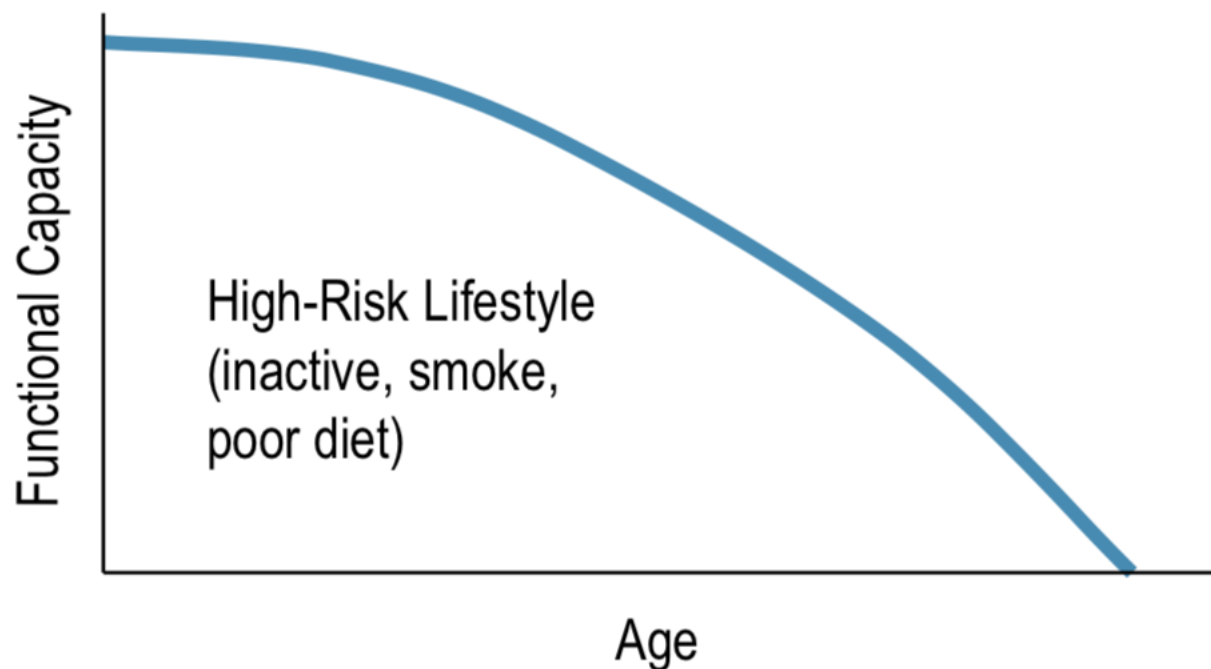
(Blair and Wei, 2000)



Chronic disease (Myers, 2002)



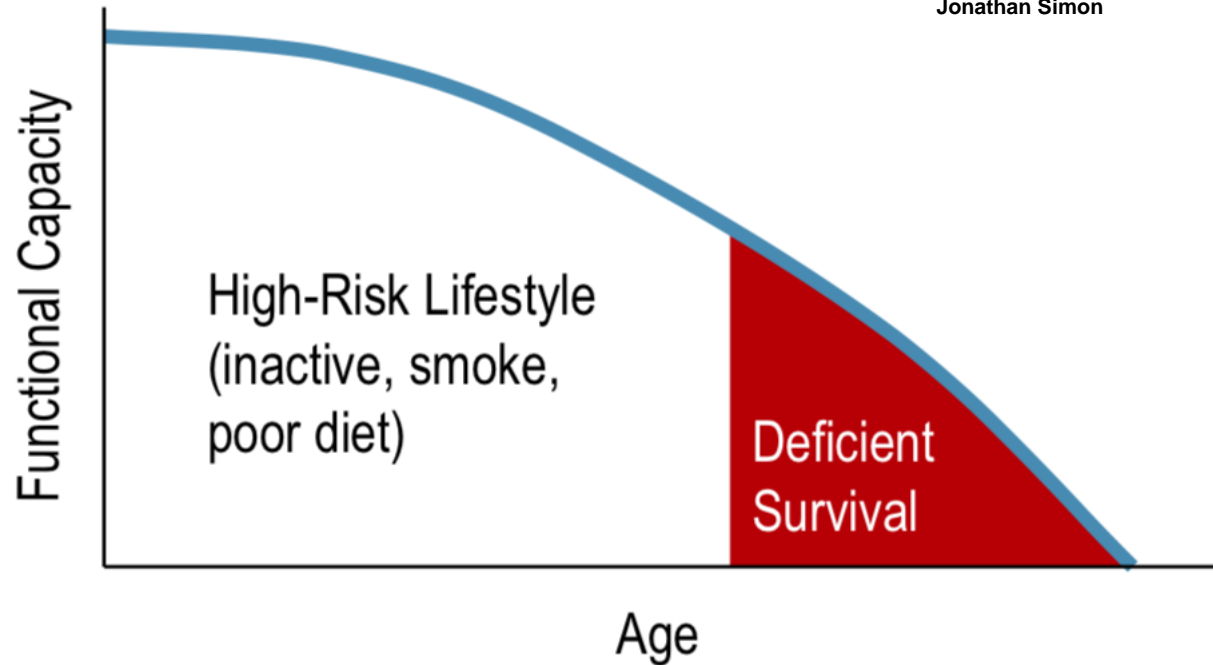
“Deficient survival” (NEJM, 1998)



“Deficient survival”

“Health life expectancy.”

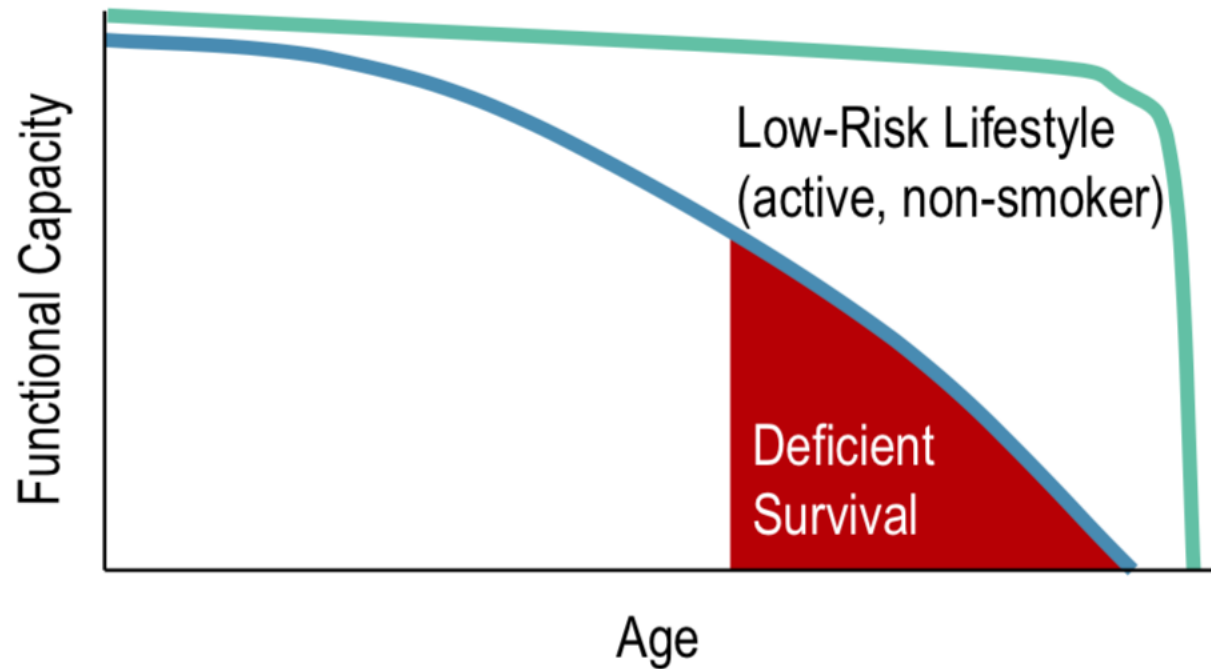
Jonathan Simon



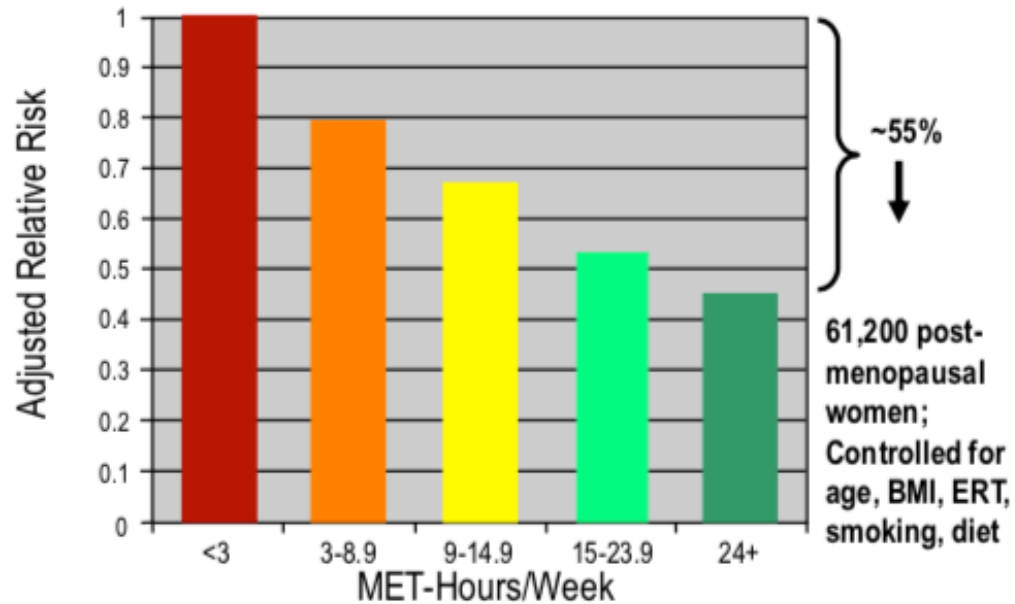
“Deficient survival”

*“The idea is to die young
as late as possible.”*

Ashley Montagu



Osteoporosis



(Feskanich D et al, 2002)

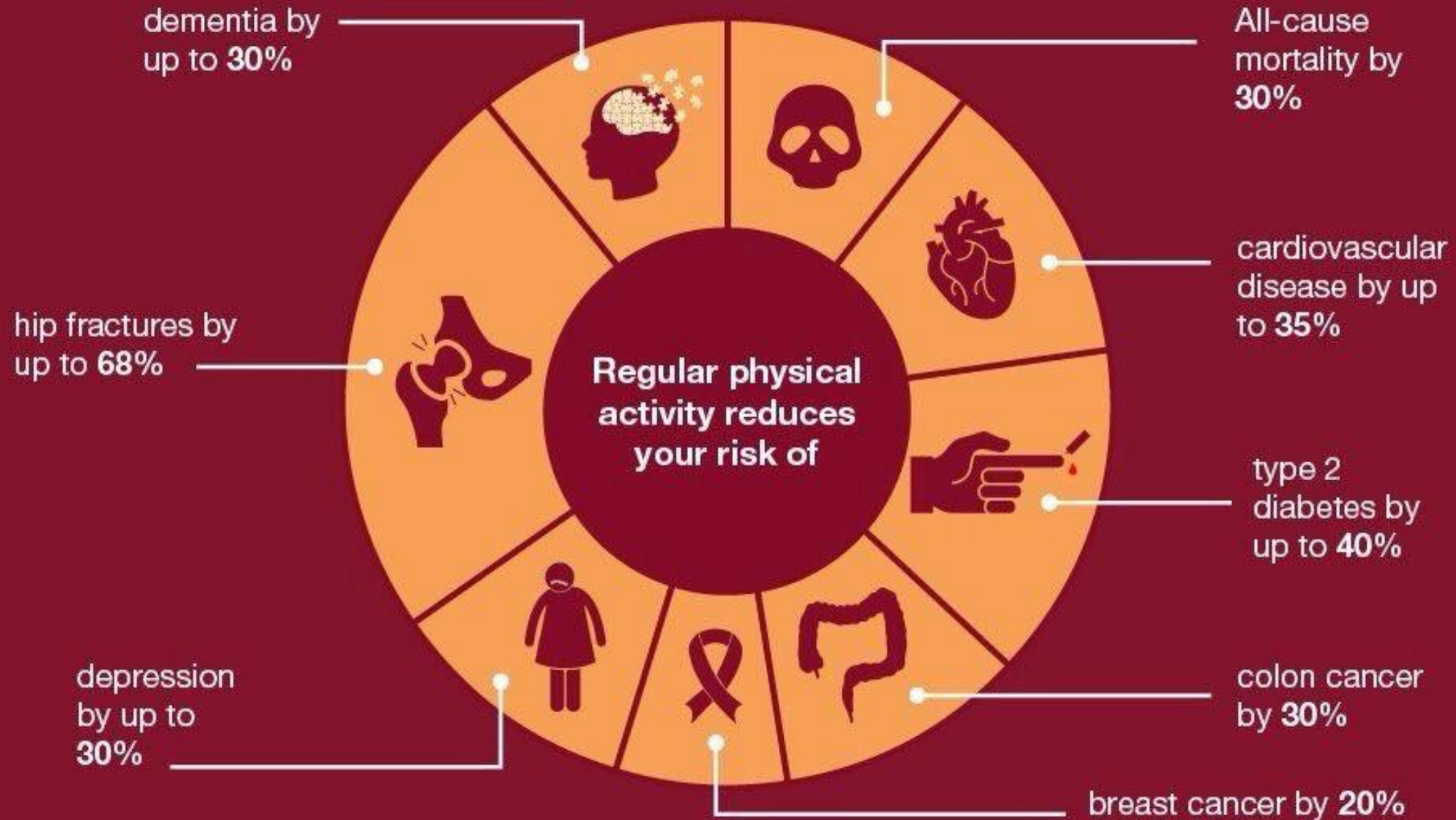
Drugs improve density – but perhaps not fracture risk

Cost between \$USD 1000 to \$USD 12,000/year

Side effects include osteosarcoma...



What are the health benefits of physical activity?



Primary and secondary prevention

Cancer (breast and colon)

Hypertension

Depression

Osteoporosis

Dementia

Coronary artery disease

Lower death rate from all causes

compelling

/kəm'peɪlɪŋ/ 

adjective

evoking interest, attention, or admiration in a powerfully irresistible way.

"his eyes were strangely compelling"

synonyms: **enthraling, captivating, gripping, engrossing, riveting, spellbinding, entrancing, transfixing, mesmerizing, hypnotic, mesmeric, absorbing, fascinating, thrilling, irresistible, addictive; informal unputdownable**

"she gave a compelling and intensely dramatic performance"

- not able to be refuted; inspiring conviction.

"there is compelling evidence that the recession is ending"

synonyms: **convincing, persuasive, cogent, irresistible, forceful, powerful, potent, strong, weighty, plausible, credible, effective, efficacious, sound, valid, reasonable, reasoned, well reasoned, rational, well founded, telling, conclusive, irrefutable, unanswerable, authoritative, influential**

"he had no compelling arguments for changing the status quo"

- not able to be resisted; overwhelming.
"the temptation to give up was compelling"



A drug called exercise



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Generic name: Physical activity



Other Brand names:

Jogging, hiking, rolling, swimming, aerobics, biking, tennis, basketball, soccer, dancing, gardening, etc.

Dosage:

Optimum 150 minutes per week in adults; 60 min per day in children has proven efficacy. Even low doses have been shown to have benefit. Advise to start with low dose and advance as tolerated.

Pregnancy and Lactation:

Completely safe. Good for mother and baby.



Indications and usage



Prevent obesity and mitigate its risks

Reduce development and improve management of diabetes

Lower risk of cancer (breast and colon)

Treatment of hypertension

Prevent osteoporosis and fractures

Manage depression and anxiety

Reduce risk of dementia

Recreational uses

Decrease risk of premature death



Side effects



Decreased BP, pulse and blood sugar;

Stronger muscles & bones,

Weight loss;

Improved mood, confidence, self esteem and concentration;

Bowel & sleep habits improved;

Look & feel better.

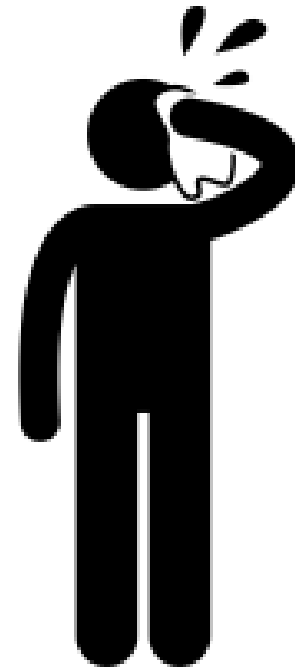


Adverse reactions

Sweating;

Injury (beware overdose);

Sudden death (extremely rare).



Routes of administration



Self administer or with others;

Start off slowly, add minutes and intensity PRN;

Change formulations to decrease boredom & improve compliance;

Take outdoors or indoors any time of day.



Exercise is a wonder drug



If we had a pill that conferred the proven health benefits of exercise, physicians would prescribe it to every patient and healthcare systems would find a way to make sure every patient had access to this **wonder drug**.



Why do we neglect activity?



Easier to write a prescription

Medication adherence is very low

Can be difficult to convince a patient to exercise

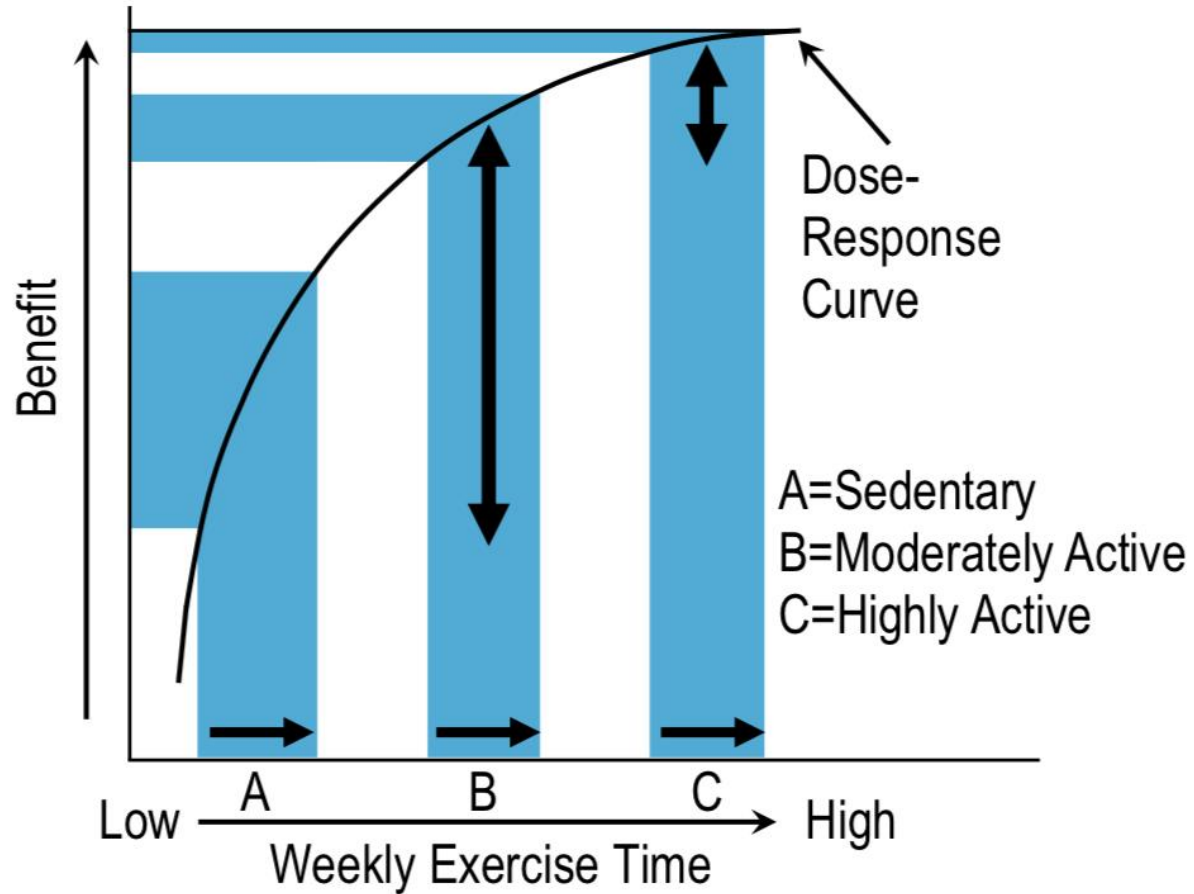
Belief that we cant change habits



It's not easy but...



How much activity?



What should we aim for?



At least:

150 (-300) minutes of moderate intensity exercise or 75 (-150) minutes of vigorous-intensity exercise

But:

Additional health benefits beyond 300 minutes

And:

Muscle strengthening twice a week provides further benefit



Physical activity – not exercise

Sports / exercise / activity

Aerobic / resistance

Work – active / sedentary

Drive or commute

Kids

Pets

MOVE YOUR WAY
Adults need a mix of physical activity to stay healthy.

Moderate-intensity aerobic activity*
Anything that gets your heart beating faster counts.

at least **150** minutes a week

AND

Muscle-strengthening activity
Do activities that make your muscles work harder than usual.

at least **2** days a week

* If you prefer vigorous-intensity aerobic activity (like running), aim for at least 75 minutes a week.

If that's more than you can do right now, **do what you can.** Even 5 minutes of physical activity has real health benefits.

Walk. Run. Dance. Play. **What's your move?**



Do you walk faster than the reaper?

Not everyone likes walking

Correlation between walking speed and survival

Walking less than 3 km/hour was predictive of mortality

(Stanaway, 2011)



Incidental activity

Car park – park furthest from shops

Stairs / hills

Standing desk

Get off bus / tram / train early and walk extra

Walk kids to school

Help with kids sport

Office end of hallway – day in clinic 7000 steps/day

Babies – progressive resistance program



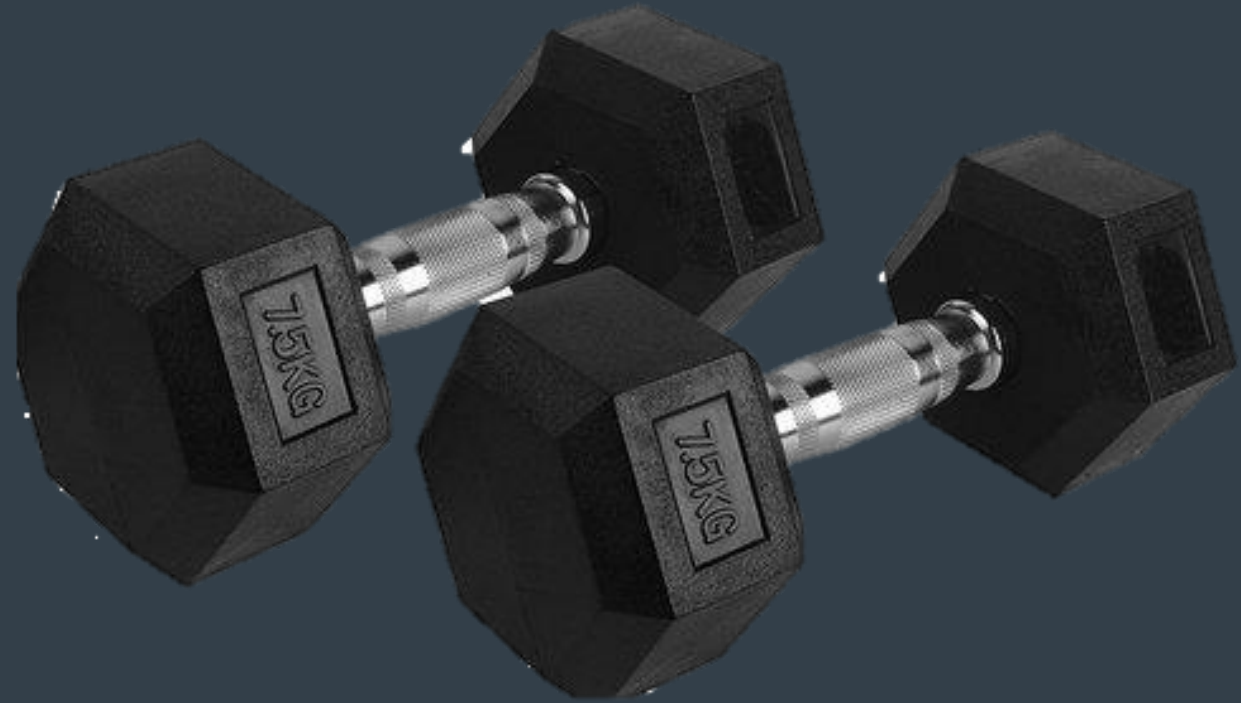
Gyms

Need to change the focus:

Clients to patients

Heart and lungs not abs and butts

Health and not fitness



Mode of exercise?



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**So what do we do in our
clinics?**



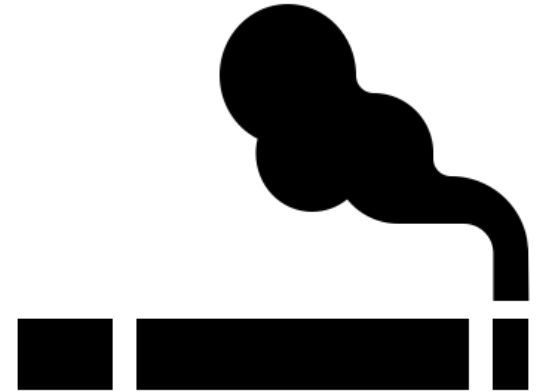
Smoking

Do you smoke?

How much do you smoke?

How long have you smoked?

Pack years.



“You know its bad for you right..?”

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Exercise vital sign



A. On average, how many days/week do you engage on moderate or greater physical activity?

B. On those days, how many minutes do you engage in activity at this level?

$$EVS = A \times B$$

Aim for 150 minutes +/- week

Simply ACTIVE / INACTIVE



Prescribing exercise works

Cost effective way of promoting physical activity in a primary care setting (BJSM 2014)

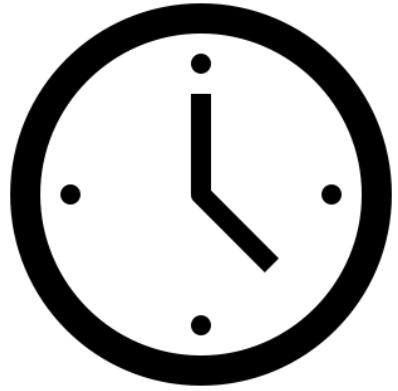
NNT is 12 (compared to similar benefit of quitting smoking with a NNT of 50-120)

Exercise prescription can increase physical activity by 10%

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No time..?

Running late? Too many other concerns on the patient's list? Relax. Perhaps you can discuss physical activity at next visit. Hopefully office staff will have assessed exercise and provided resources.



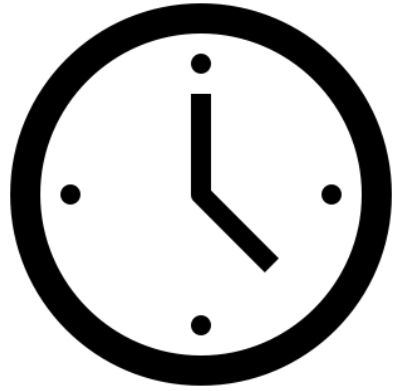


One minute

Quickly congratulate patients who are getting 150 minutes or more of moderate or greater physical activity.

Advise patients who are getting fewer than 150 minutes of the importance of physical activity, especially linking benefits to patient's complaints, problems, and diagnoses.





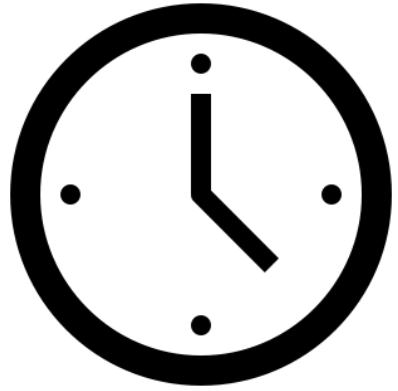
Two minutes

Review key messages about the importance of physical activity.

Offer a generic Exercise Prescription.

Suggest useful resources (e.g. pedometer, community resources, fitness professional).





Longer..?

Minutes for Brief Counselling:

Assess readiness for change regarding exercise habits.

Ask what the patient might want to do to be more active and barriers to prevent this from happening -- brainstorm on how to get around them.

Explain in detail how exercise can affect diseases they have or are at risk for and how they can go about incorporating it into their life.



What can you do on Monday?

Make your patient aware of the potential benefit of exercise

Consider activity and exercise in every consult

Use the exercise vital

Think activity not exercise



Thank you



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SPORTS MEDICINE SPECIALISTS