

# Exercise is medicine

## *Moving an idea into action*

**Stephen A Margolis**

*If we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way to health.*<sup>1</sup>

Barely a day passes in the popular press without mention of the falling levels of fitness in Australia and the consequent impact on our national health and wellbeing. Countless stories are published on the best solutions, including a multitude relating to exercise. The word ‘exercise’ is interesting in itself, as the formal definition includes ‘activity requiring physical effort, carried out to sustain or improve health and fitness’<sup>2</sup> and ‘bodily exertion for the sake of developing and maintaining physical fitness’.<sup>3</sup>

So perhaps the concept of exercise being intrinsically tied to health is to distinguish it from work or other activities? An office worker walks the dog each day for health and fitness, while a gardener does not need to as they have already clocked up the miles before heading home. Is this division semantic or real?

Another way to explore this is to note that exercise is an active rather than a passive process, with participants consciously undertaking additional effort involving a degree of strain or stress on their bodies. Some avoid exercise for fear of the associated sensations of discomfort or pain, as many assume that these will lead to suffering. However, pain and suffering are not inseparably linked.<sup>4</sup> ‘Pain is inevitable. Suffering is optional.’<sup>5</sup> In simple terms, rather than pain always reflecting injury, pain associated with exercise may simply be an indicator of benefit.

The evidence for exercise improving health outcomes including chronic disease is legion. Orchard details the

benefits across a plethora of these conditions including osteoarthritis, back pain, diabetes, cardiovascular disease and depression.<sup>6</sup> Cormie et al detail the benefits of physical activity in cancer management, where those ‘who regularly engage in moderate-intensity exercise are more likely to have: fewer and less severe treatment-related side effects; a lower relative risk of developing other chronic diseases; and, in some cases, a lower relative risk of cancer recurrence and mortality.’<sup>7</sup>

What is the role of the general practitioner (GP) in fostering, mentoring and encouraging patients to exercise? As Nunan explains, ‘effective translation of exercise as medicine goes beyond simply telling patients to “exercise” or “exercise several days a week” and requires “exercise be prescribed for patients in a manner analogous to a drug prescription”’.<sup>8</sup>

That exercise prescription should be tailored for each patient seems intrinsically self-evident, as this would be in line with all other treatments. Williams et al explore the evidence that all clinically stable patients, including the very frail, are able to participate in and achieve health benefits from exercise when the program is tailored to their personal health and other circumstances.<sup>9</sup> Edbrooke et al<sup>10</sup> discuss the work of the Exercise is Medicine group, who propose a three-step approach:

1. Assess the patient’s current exercise program – number of exercise days per week, number of minutes per day and intensity.
2. Provide ongoing encouragement plus adjustment of the patient’s program as required.
3. Refer to exercise professionals as required or when exercise needs to be supervised for safety reasons.

The Exercise is Medicine group also provides a range of materials for GPs to

guide the exercise prescription process. Note that benefit accrues from moderate or vigorous exercise; that is, exercise is an active event during which the body is placed under some form of physical stress.

In summary, the rationale for promoting exercise for both primary and secondary health prevention benefits is unequivocal. The next challenge is to move beyond simple encouragement to an individualised program, where exercise prescription is as nuanced as all other forms of clinical prescription.

### Author

Stephen A Margolis, OAM; Editor in Chief, *Australian Journal of General Practice*; Professor, School of Medicine, Griffith University, Qld; Staff Specialist, Royal Flying Doctor Service.

### References

1. Hippocrates. Hippocratic writings. Chicago: Encyclopedia Britannica, 1955.
2. Cambridge Dictionary [Internet]. Exercise. Cambridge, UK: Cambridge University Press, [date unknown]. Available at <https://dictionary.cambridge.org/dictionary/english/exercise> [Accessed 3 March 2020].
3. Merriam-Webster Dictionary [Internet]. Exercise. Springfield, MA: Merriam-Webster Incorporated, [date unknown]. Available at [www.merriam-webster.com/dictionary/exercise](http://www.merriam-webster.com/dictionary/exercise) [Accessed 3 March 2020].
4. Turk DC, Wilson HD. Pain, suffering, pain-related suffering – Are these constructs inextricably linked? *Clin J Pain* 2009;25(5):353–55. doi: 10.1097/AJP.0b013e31819c62e7.
5. Murakami H. What I talk about when I talk about running. New York, NY: Knopf Publishing Group, 2008.
6. Orchard JW. Prescribing and dosing exercise in primary care. *Aust J Gen Pract* 2020;49(4):182–86.
7. Cormie P, Trevaskis M, Thornton-Benko E, Zopf EM. Exercise medicine in cancer care. *Aust J Gen Pract* 2020;49(4):169–74.
8. Nunan D. Doctors should be able to prescribe exercise like a drug. *BMJ* 2016;353:i2468. doi: 10.1136/bmj.i2468.
9. Williams A, Radford J, O’Brien J, Davison K. Type 2 diabetes and the medicine of exercise The role of general practice in ensuring exercise is part of every patient’s plan. *Aust J Gen Pract* 2020;49(4):189–93.
10. Edbrooke L, Granger CL, Denehy L. Physical activity in lung cancer. *Aust J Gen Pract* 2020;49(4):175–81.