Lack of physical activity is a global problem

Primary care is an essential partner in the response

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Physical activity has been more important than ever during the covid-19 pandemic. Insufficient physical activity is a global health problem and has itself been called a pandemic.1 Lockdowns have reduced time spent on physical activity and increased sedentary time,2 3 both of which are associated with risks to health.

World Health Organization guidance (updated in 2020) recommends a minimum of 150-300 minutes of moderate intensity physical activity or 75-150 minutes of vigorous intensity physical activity weekly, and encourages people to exceed these targets.4 5 Healthcare professionals have an important role in helping people to make any necessary changes to their behaviour.6

The authors reviewed 51 trials evaluating 'predominantly aerobic based physical activity' interventions delivered to adults. Participants in trial intervention groups increased moderate to vigorous intensity physical activity (MVPA) by a modest 14 min/week on average relative to controls. But this weighted mean could obscure substantial variation between individuals. These participants were also more likely than controls to meet guideline targets for MVPA. Interventions involving five or more contacts with health professionals, longer follow-up, or those delivered by primary care and other professionals were associated with greater improvements.7

Many gaps remain in the literature, however, and Kettle and colleagues’ findings reflect this uncertainty.8 Trials measuring physical activity with objective devices, such as accelerometers or wearable activity trackers, found no significant difference in MVPA between groups, while trials relying on self-reported activity showed an increase of 24 min/week in intervention groups.7 In a previous meta-analysis, Larsen and colleagues found that interventions using physical activity monitors increased MVPA by 48.5 min/week.9 But they judged this evidence to be 'low certainty' due to publication and small study biases.

The 14 minute improvement reported by Kettle and colleagues might be an underestimate because some control group participants received brief advice on physical activity, itself a recognised intervention.10 This advice could have increased physical activity levels among controls, reducing the difference between control and intervention groups.

Broad range of benefits

The benefits of physical activity are broad and include better mental health, a lower risk of cardiovascular disease, improved sleep, and a lower risk of some cancers.10 Benefits are dose dependent and nonlinear, with no lower threshold. The biggest benefits occur when moving from no activity to some activity; even small changes are clinically significant.4 5 11 12

Increasing duration of physical activity of any intensity, and less time spent sitting, is associated with a reduced risk of premature mortality.13 Evidence from the H1N1 influenza epidemic suggests that regular physical activity is associated in a dose dependent manner with reduced incidence, duration, and severity of acute upper respiratory infections.14 Evidence is emerging that physical activity could even improve immune response to covid-19 vaccines.15 16

Time spent sitting (sedentary time) is an independent risk factor for all cause mortality, cardiovascular disease, cancer, and type 2 diabetes.4 Kettle and colleagues reported no significant effect of primary care interventions on sedentary time, while Larsen and colleagues found that physical activity monitor based interventions were associated with a mean decrease of 9.9 min/day.7 9

The benefits of physical activity were already clear,4 and this new meta-analysis shows that interventions delivered by health professionals can increase physical activity levels among primary care patients.7 According to a third recent meta-analysis,17 the number needed to treat for primary care promotion to increase one inactive adult’s physical activity to internationally recommended levels is 12. This figure compares favourably with a number needed to treat of 20 for nicotine replacement therapy for smoking cessation.18

The interventions most powerfully associated with improvements are not yet clear, but guidelines such as those from the National Institute for Health and Care Excellence or other simple frameworks8 19 take a pragmatic approach and can be a useful tool in conversations with patients. But there is room for digital innovation: people using streaming and subscription services, apps, online platforms, and recorded or live activity classes are more likely to meet guideline targets for physical activity.20 Tailored solutions are also likely to be more effective; home based exercise can improve physical activity levels in older adults, for example.21
Primary care is an essential partner in global efforts to increase physical activity to levels recommended by WHO, and we now have evidence to support primary care interventions. Future research should focus on identifying the most effective interventions, optimising outcomes for all population groups, and evaluating how best to decrease sedentary time as well as increasing physical activity.

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