

## A useful New Year's resolution

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A new study, published just in time for the New Year's resolutions, shows that the antihypertensive effect of exercise may be equal to that of drugs.



*Photo: Einar Nilsen*

The advertising campaigns in January for the gyms around Norway are launched every year with the same regularity as the New Year's resolutions. This is no coincidence; starting to exercise comes top of the list of the most popular New Year's resolutions (1). Now those who have resolved to make exercise their goal in the New Year have yet another argument for abiding by their resolution in 2019. In December 2018, the first major study comparing the effect of exercise and drug treatment for hypertension among otherwise healthy adults was published (2).

The study is a random-effects network meta-analysis. The methodology enables a systematic comparison of interventions across the included studies. Altogether 391 randomised controlled trials including a total of almost 40 000 patients were included (2). A main finding was that among the participants with hypertension, there was no difference between the antihypertensive effect of aerobic exercise and resistance training on the one hand, and all usual classes of antihypertensive drugs on the other: Exercise reduced systolic blood pressure by an average of 8.96 mm Hg (95 % confidence interval, -10.27 to -7.64) (2). There was also a clear correlation between the effect of exercise and baseline blood pressure, shown by the fact that the patients with the highest resting systolic blood pressure also had the best effect from exercise.

The study has some clear weaknesses. For example, the methodology only enables indirect comparisons between participants, as the authors themselves point out (2). Nor does the study differentiate between types of exercise. Nevertheless, even though the antihypertensive effect of exercise is well known, and advice on physical activity should always be given to patients with high blood pressure, this is the first time that such a major

study has shown that exercise may have an antihypertensive effect equal to that of drugs (3).

This is good news for a number of reasons. Hypertension affects more than one billion people and is the most significant risk factor for cardiovascular disease, which is the most common cause of death globally (4). The use of antihypertensive drugs is increasing, both in Norway (5) and in the rest of the world (3). At the same time, the threshold is being lowered for the level at which blood pressure should be perceived as a risk factor for disease. It has recently been estimated that 63 % of all patients older than 45 years need treatment for hypertension, if the American College of Cardiology and the American Heart Association's new definition of hypertension is applied to the American population (6).

Exercise is a cheap and readily available intervention with few adverse effects. Studies have repeatedly shown that increased physical activity is linked to lower general morbidity and mortality. This applies at any age. Follow-up data from men who participated in the Oslo Health Study in 1972 and 2000 showed that physically active elderly people have lower mortality than those who are sedentary, also when the activity is increased in old age, with a predictive value on a par with smoking (7). However, the specific effect has been documented to a lesser extent. This is a problem that, in the worst case, may lead to pharmacological overtreatment. 'There is a real risk that what we define as evidence-based therapy consists of more drugs and less physical activity than what could yield the optimal results,' Rune Wiseth wrote in an editorial in the Journal of the Norwegian Medical Association in 2014 about the lack of this type of documentation (8). It is to be hoped that studies such as this recently published one may help remedy this.

A study undertaken in 2002 showed that 46 % of those who had made a New Year's resolution to change their lifestyle maintained the change after six months (9). A New Year's resolution to do more exercise may be a good start, both to avoid cardiovascular disease and to avoid later drug treatment for hypertension.

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