

# THE KEY TO LONG LIFE IS EXERCISE

## New review finds that people have a lower chance of premature death when they are active

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For better health and a longer life span, exercise is more important than weight loss, especially if you are over weight or obese, according to an interesting new review of the relationships among fitness, weight, heart health and longevity. The study, which analysed the results of hundreds of previous studies of weight loss and workouts in men and women, found that obese people typically lower their risks of heart disease and premature death far more by gaining fitness than by dropping weight or dieting.

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**F**or better health and a longer life span, exercise is more important than weight loss, especially if you are overweight or obese, according to an interesting new review of the relationships among fitness, weight, heart health and longevity. The study, which analysed the results of hundreds of previous studies of weight loss and workouts in men and women, found that obese people typically lower their risks of heart disease and premature death far more by gaining fitness than by dropping weight or dieting.

The review adds to mounting evidence that most of us can be healthy at any weight, if we are also active enough. I have written frequently in this column about the science of exercise and weight loss, much of which is, frankly, dispiriting. If your goal is to be thinner, this past research overwhelmingly shows that people who start to exercise rarely lose much, if any, weight, unless they also cut

back substantially on food intake. Exercise simply burns too few calories, in general, to aid in weight reduction. We also tend to compensate for some portion of the meagre caloric outlay from exercise by eating more afterward or moving less, or unconsciously dialling back on our metabolic expenditure, as I wrote about in last week's column.

Chen Gaesser, a professor of exercise physiology at Arizona State University in Phoenix, took over as the lead co-author of workouts for fat loss. For decades, he has been studying the effects of physical activity on people's body composition and metabolism, as well as their endurance, with a particular focus on people who are obese. Much of his past research has underscored the health benefits of weight loss. In a 2015 experiment he oversaw, for instance, fit sedentary, overweight women began a new routine of walking three times a week for 30 minutes. After 12 weeks, a few of them had shed some bodyfat, but 55 of them had gained weight.

In other studies from Gaesser's lab, though, overweight and obese people with significant health problems, including high blood pressure, poor cholesterol profiles or insulin resistance, a marker for Type 2 diabetes, showed considerable improvements in those conditions after they started exercising, whether they dropped any weight or not. Seeing those results, Gaesser began to wonder if fitness might enable overweight people to enjoy sound metabolic health, whatever their body mass numbers, and potentially live just as long as thinner people — or even longer, if the slender people happened to be fit of shape.

So, for the new study, which was published this month in *Science*, he and his colleague Siddhartha Agasthi, a professor of education and kinesiology at the University of Virginia in Charlottesville, began sifting through research databases for past studies related to dieting, exercise, fitness, metabolic health and longevity. They were especially interested in meta-analyses, which pool a large number of data from multiple past studies, allowing researchers to look at results from fit *and* obese people, rather than in most individual studies of weight loss or exercise, which tend to be small-scale.

They wound up with more than 200 relevant meta-analyses and individual studies. Then they set out to size what all of this research, involving tens of thousands of men and women, most of them obese, indicated about the relative benefits of losing weight or getting fit for improving metabolism and longevity. In effect, they asked whether someone who is heavy gets more health benefits from losing weight or getting up and moving.

The answer, they found, was not close. "Compared head-to-head, the magnitude of benefit was far greater from improving fitness than from losing weight," Gaesser said.

As a whole, the studies they cite show that sedentary, obese men and women who begin to exercise and improve their fitness can lower their risk of premature death by as much as 30% or more, even if their weight doesn't change. This improvement generally puts them at lower risk of early death than people who are considered to be of normal weight but out of shape, Gaesser said.

On the other hand, if any people lose weight by dieting (not fitness), their statistical risk of dying typically drops by about 10%, but not to all that much. Some of the research cited in the new review finds that weight loss among obese people does not decrease mortality risks at all.

The primary takeaway of the new review, Gaesser concluded, is that you do not need to lose weight to be healthy. "You will be better off in terms of mortality risk by increasing your physical activity and fitness than by intentionally losing weight," he said. In a 2018 paper, he and Gaesser

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back substantially on food intake. Exercise simply burns too few calories, in general, to aid in weight reduction. We also tend to compensate for some portion of the meagre caloric outlay from exercise by eating more afterward or moving less, or unconsciously dialling back on our

bodies' metabolic operations to reduce overall daily energy expenditure, as I wrote about in last week's column.

Glenn Gaesser, a professor of exercise physiology at Arizona State University in Phoenix, is well-versed in the inadequacies of workouts for fat loss. For decades, he has been studying the effects of physical activity on people's body compositions and metabolisms, as well as their endurance, with a particular focus on people who are obese. Much of his past research has underscored the futility of workouts for weight loss. In a 2015 experiment he oversaw, for instance, 81 sedentary, overweight women began a new routine of walking three times a week for 30 minutes. After 12 weeks, a few of them had shed some body fat, but 55 of them had gained weight.

In other studies from Gaesser's lab, though, overweight and obese people with significant health problems, including high blood pressure, poor cholesterol profiles or insulin resistance, a marker for Type 2 diabetes, showed considerable improvements in those conditions after they started exercising, whether they dropped any weight or not. Seeing these results, Gaesser began to wonder if fitness might enable overweight people to enjoy sound metabolic health, whatever their body mass numbers, and potentially live just as long as thinner people — or even longer, if the slender people happened to be out of shape.

So, for the new study, which was published this month in *iScience*, he and his colleague Siddhartha Angadi, a professor of education and kinesiology at the University of Virginia in Charlottesville, began scouring research databases for past studies related to dieting, exercise, fitness, metabolic health and longevity. They were especially interested in meta-analyses, which pool and analyse data from multiple past studies, allowing researchers to look at results from far more people than in most individual studies of weight loss or exercise, which tend to be small-scale.

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The contest, they found, was not close. "Compared head-to-head, the magnitude of benefit was far greater from improving fitness than from losing weight," Gaesser said.

As a whole, the studies they cite show that sedentary, obese men and women who begin to exercise and improve their fitness can lower their risk of premature death by as much as 30% or more, even if their weight does not bud ge. This improvement generally puts them at lower risk of early death than people who are considered to be of normal weight but out of shape, Gaesser said.

On the other hand, if heavy people lose weight by dieting (not illness), their statistical risk of dying young typically drops by about 16%, but not in all studies. Some of the research cited in the new review finds that weight loss among obese people does not decrease mortality risks at all.

The primary takeaway of the new review, Gaesser concluded, is that you do not need to lose weight to be healthy. "You will be better off, in terms of mortality risk, by increasing your physical activity and fitness than by intentionally losing weight," he said.