

# Women exercisers face health risk if not keeping up energy intake

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Credit: University of Otago

Many New Zealand women who exercise recreationally could be risking their health by not eating enough to match the energy they expend, new University of Otago research suggests.

Department of Human Nutrition researchers surveyed 109 women recreational athletes and found that 49 (44 per cent) may be in a state of low energy availability (LEA) or at increased risk of becoming so over time.

Study lead author Dr Katherine Black says that when insufficient energy intake is combined with [exercise](#), the body acts to conserve energy through a range of hormonal adaptations, which ends up harming health.

"Physical activity, sport and exercise are undoubtedly an important part of a healthy lifestyle. However, when energy expenditure during exercise significantly exceeds energy intake this can cause problems, particularly for bone health and reproductive function," Dr Black says.

To be eligible for the survey, women had to be non-elite athletes who did at least 150 minutes of moderate intensity [physical activity](#) per week or 75 minutes of vigorous intensity physical activity, or an equivalent combination of both moderate and vigorous activities.

The research team found that for every one hour increase in exercise per week by a female exerciser there was a significant increase in the likelihood of being at risk of LEA.

There was also a significant association between the number of days off training due to injury and the risk of LEA, suggesting that injuries are linked with LEA risk.

"Given the high proportion of recreational athletes at risk of LEA, the links we have seen with injury, and previous research showing the negative long term health consequences, we believe it is important to raise awareness of LEA and its potential serious health consequences.

"However, we also need to encourage New Zealand recreational exercisers to continue taking part in physical activity as the [health](#) benefits are well established. It is about finding the correct balance between physical activity, [energy intake](#) and well-being."

The findings appear in the most recent issue of the *International Journal of Sport Nutrition and Exercise Metabolism*.

**More information:** Joanne Slater et al. Female Recreational Exercisers at Risk for Low Energy Availability, *International Journal of*

*Sport Nutrition and Exercise Metabolism* (2016). [DOI: 10.1123/ijsnem.2015-0245](https://doi.org/10.1123/ijsnem.2015-0245)

Provided by University of Otago

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