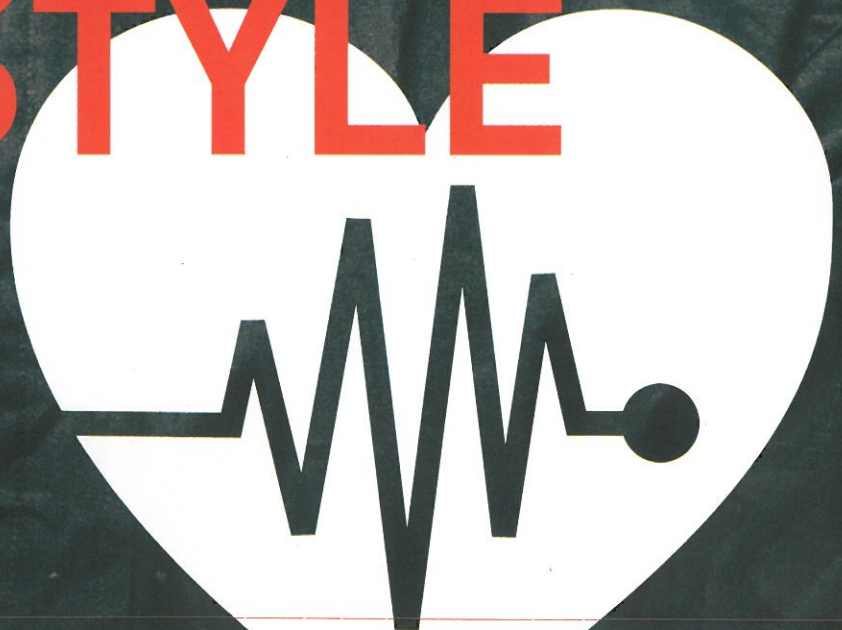


# HEALTHY LIFESTYLE

in the blood



## A UNIVERSITY OF CANBERRA LECTURER HAS BEEN AWARDED A \$50,000 ACT GOVERNMENT GRANT TO FURTHER HIS RESEARCH INTO EXERCISE AND DIABETES.

As a keen orienteer, sports studies lecturer Ben Rattray is well aware of the benefits of exercise. Now he's working on a way to use 'eccentric' exercise to help people with diabetes manage their condition.

Dr Rattray received \$50,000 under the ACT Health and Medical Research Support Program in January this year – the largest awarded in the round – to fund the work.

"We know that exercise is an extremely powerful tool to treat and prevent diabetes. Unfortunately, not enough people exercise or they don't exercise enough," Dr Rattray says.

"We hope that this research will show how specific exercise can hasten the benefits gained, allowing more people to use exercise as prevention and treatment for diabetes and other chronic disease."

**"Unfortunately, not enough people exercise or they don't exercise enough"**

Dr Rattray hopes to recruit around 40 newly diagnosed Type 2 diabetics for his study, which he will undertake with the assistance of Dr Walter Abhayaratna, a cardiologist from The Canberra Hospital.

He'll use existing clinical data, as well as take additional blood tests.

"Existing clinical data on diabetics tells us about glucose sensitivity, measures like resting glucose

and the insulin response to glucose. Some of these measures are part of a normal GP check-up," he says.

"So what we're going to do is take some more blood and do some measures on inflammatory markers. Inflammation is related to a lot of chronic disease and the more 'adipose tissue' – the more fat – someone carries, the more inflammation they tend to have and if they do less exercise they tend to have higher inflammation as well."

Dr Rattray says over time, inflammation can interfere with a lot of the body's systems and how they work, and this is where exercise comes in.

"Essentially, we know that exercise improves glucose sensitivity so it reduces the risk of diabetes."

Dr Rattray uses TV show *The Biggest Loser* as an example.

"If you've ever watched *The Biggest Loser*, you will notice that sometimes you get people that are insulin dependent so they are pumping insulin into themselves," Dr Rattray explains.

"Then suddenly, they lose all this weight as a result of the exercise they are doing and they don't need anymore medication. They lose the diabetes status.

"So we know that exercise does all this but the problem is getting people to exercise and that can be a challenge," he says.

In his study, Dr Rattray will investigate the increased benefits of 'eccentric exercise,' over conventional physical activity.

### DR BEN RATTRAY

Dr Rattray joined the University of Canberra in February last year, after completing a PhD in exercise physiology at the University of Sydney. In his PhD, Dr Rattray looked at eccentric exercise and how to prevent injuries as a result of eccentric exercise.

Previously Dr Rattray undertook a Masters of Sport Studies at the University of Canberra, where he developed specific test for monitoring performance in orienteers. Dr Rattray is a keen orienteer, having spent the past 19 years navigating his way through the countryside, from Romania to the northern reaches of Canada.

Eccentric exercise differs from conventional concentric exercise in that work is performed while the muscle is lengthening as opposed to shortening - walking downhill compared to walking uphill is a good example.

**"Essentially, we know that exercise improves glucose sensitivity so it reduces the risk of diabetes"**

"A lot of people are sore for a few days after going for a bushwalk and walking a significant distance downhill, or after starting a new gym workout. It places different stress on the body but one that we believe can result in relatively large positive changes."

Herein lays the catch 22.

"No-one wants to exercise if they are sore all the time, however a little soreness now and then will result in positive changes," he says.

"Potentially you could do much less of it in order to get the same kind of positive result from exercise."

Dr Rattray hopes to start his study by mid-year with volunteers training for a two-week period.

If you are interested in participating in the research project and meet the criteria (a newly diagnosed Type 2 diabetic) please contact Dr Ben Rattray on 02 6201 5145.



Dr Rattray promotes exercise as a treatment for diabetes