

Looking at the best balance of macronutrients for people with diabetes

Macronutrients – carbohydrates, protein and fats – are the essential building blocks of everyone’s diet. The human body needs three main macronutrients: protein, fat and carbohydrates.

Eating these in the right proportions is important for everyone including people living with type 2 diabetes, however scientists still don’t have a consensus on the best balance of macronutrients for people with type 2 diabetes.

This is the problem Dr Jibrán Wali from the Charles Perkins Centre at the University of Sydney is tackling with the help of a grant from the Diabetes Australia Research Trust.

“At the moment we don’t have clear evidence for the best balance of macronutrients for people with type 2 diabetes,” Dr Wali said.

“One problem researchers have had is that if we want to see what happens when we increase a particular macronutrient, say protein, then we need to compare that to the effects of a ‘standard’ diet and we just haven’t had a standard human diet to compare it to.

“Also, when you increase or decrease one macronutrient in the body you have to make adjustments to the proportions of other macronutrients which complicates the interpretation of the findings and can sometimes lead to some unintended side-effects.

“For instance, reducing intake of carbohydrate and increasing protein in a diet could improve blood glucose control, however that could negatively impact on kidney function in people with diabetes.

“We don’t know the best proportions of macronutrients in someone with type 2 diabetes because it is very hard to manipulate one component of the diet without upsetting a range of other variables.

“For example, a low carbohydrate diet is often also a high protein diet which makes it difficult to conclude if the observed effects of such a diet are due to reduced carbohydrate consumption or an increased intake of protein.

“That is why my research will use the Geometric Framework methodology, developed by Professor Stephen Simpson and David Raubenheimer, which helps people evaluate a full range of diets with various proportions of proteins, carbohydrates and fats, and also facilitates studying the interaction between these nutrients and their impact on overall health.

“Hopefully, it will help us learn the optimum combination of macronutrients for people with type 2 diabetes.”

Diabetes Australia CEO A/Professor Greg Johnson said supporting research like Dr Wali's was an important part of responding to the challenges of the type 2 diabetes epidemic.

"Diabetes is the single biggest challenge confronting Australia's health system and we need research to meet those challenges," A/Professor Johnson said.

"Diabetes Australia is pleased to be able to support researchers like Dr Wali and research institutes like the Charles Perkins Centre.

"Their work will help more people live well with diabetes."

Keep an eye on our Facebook page for updates on this and other projects funded through the Diabetes Australia Research Trust.