

Body and build of Indigenous Australians in the spotlight

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The first ever detailed study of the body build and composition of Aboriginal and Torres Strait Islander people has been undertaken to help reduce the risk and impact of kidney disease in Indigenous populations.

The study by Dr Jaqui Hughes entitled, *The inter-relationships between body build, body composition, body fat distribution, metabolic syndrome and inflammation in adult Aboriginal and Torres Strait Islander people*, was vital to investigate high levels of obesity among this population, which is strongly linked to serious illnesses including diabetes, kidney disease and heart problems.

Almost 60 per cent of Indigenous Australians are reported to be either overweight or obese.*

Dr Hughes, Research Fellow at Menzies School of Health Research, precisely measured bone length and widths using whole body dxa in more than 600 adult Aboriginal Torres Strait Islander and non-Indigenous Australians from Darwin and regions across Northern Australia.

Australia's first Indigenous kidney specialist, Dr Hughes said overweight adults who have a larger waist than their hips (a high waist to hip ratio (WHR)) are known to have a higher risk of developing diabetes and heart disease.

"My research has shown that overweight Indigenous Australians tend to accumulate fat around their mid-sections, rather than other areas of the body (arms, thighs, calves) as was observed in the non-Indigenous population," she said.

"This pattern of central obesity (a predominantly large belly) was strongly related to the skeletal body build, particularly those longer in the legs for overall height. This was not observed in people with a European background."

Dr Hughes said since abdominal obesity accompanies a particular skeletal build, it is hoped Indigenous Australians and health centres can better appreciate the risk to the individual.

"It was concerning that young, healthy adult Indigenous people developed central body fat, while only modestly overweight without a high BMI, and was also accompanied by blood markers of chronic disease, including a tendency towards early diabetes," she said.

Dr Hughes said it has been shown in other studies that kidney function is more stressed in the presence of central obesity, and this may play a role in some of the burden of obesity and diabetes in Aboriginal and Torres Strait Islander Australians.

"Abdominal obesity is likely to be a key driver of permanent kidney damage," Dr Hughes said.

Dr Hughes said there has been a rapid increase in kidney disease among Aboriginal and Torres Strait Islander people in Australia over the last 20 years, most of which has been caused by diabetes.

"Aboriginal and Torres Strait Islander people are almost four times more likely to die with kidney disease than other Australians. They are also 14 times more likely to need in-hospital care for kidney dialysis."

Dr Hughes said controlling weight gain among young Aboriginal and Torres Strait Islander people remains a priority because it may save people from developing diabetes and kidney disease, and prevent heart attacks and strokes.

"My research has shed light on the importance of abdominal obesity and how you can 'know your risk'," she said.

“We need to educate young people about avoiding even small weight gains if you have this particular body build and avoiding other high risk behaviours, especially smoking. We need to put effort into assisting people with diabetes to lose weight, as there may be a real potential to minimise the expectant risk of kidney damage.

“I also showed that something as simple as a tape measure, to measure the waist to hip ratio, can reveal abdominal obesity. Health risk is more reliably shown by abdominal obesity than BMI and can be very easily and cheaply measured.”

Dr Hughes was conferred a Doctor of Philosophy at Charles Darwin University’s recent mid-year graduation ceremony.

* 2008 Australian Institute of Health & Welfare report, Australia’s Health. This data was based on body mass index (BMI), which gives an indication of overall body size, but does not account for the high risk abdominal obesity.

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Background:

Menzies School of Health Research (Menzies) are Australia’s only Medical Research Institute dedicated to improving Indigenous health and wellbeing. We have a 27-year history of scientific discovery and public health achievement. Menzies work at the frontline and collaborate broadly, partnering with over 60 Indigenous communities across Northern Australia to create resources, grow local skills, and find enduring solutions to problems that matter.