

Fatty acids supplements help offset inflammation

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They then examined the effects of n-3 fatty acid supplementation on Specialised Pro-resolving Lipid Mediators (SPMs) in patients with CKD. Credit: SuperFantastic

Taking a fatty acid supplement can help reduce inflammation for people with chronic kidney disease (CKD), research has found.

Scientists from UWA, the Telethon Kids Institute and Royal Perth

Hospital set out to find out if people with CKD who took a n-3 fatty acid supplement for eight weeks benefitted from less inflammation.

Those diagnosed with CKD have a higher rate of cardiovascular [disease](#) (CVD) which is partly related to [chronic inflammation](#).

UWA research fellow Dr Emilie Mas says the disease was associated with significant patient mortality, and more than 50 per cent of deaths in people with stage five CKD who were receiving dialysis was due to CVD.

She says the risk of coronary artery disease increases markedly with declining kidney function.

"Chronic inflammation is a characteristic feature in [chronic kidney disease](#) and cardiovascular disease," she says.

"Inflammation plays an important role in acute and chronic kidney injury."

They conducted a double-blind study featuring 85 patients with [chronic renal failure](#) aged between 25 and 75.

Supplement regime resolves inflammation

They then examined the effects of n-3 fatty acid supplementation on specialised pro-resolving lipid mediators (SPMs) in patients with CKD.

SPMs are a group of blood factors that are derived from n-3 fatty acids known to improve inflammation.

Patients were randomised to receive either four times one gram capsule of n-3 fatty acid taken with meals, coenzyme Q (200mg per day), both

supplements or control group who took 4g of olive oil daily for two months.

They were asked to maintain their diet, medications, alcohol intact and physical activity, with measurements taken before and after the study.

Dr Mas says the study showed for the first time that supplementing patients with CKD for eight weeks with n-3 fatty acids enhanced the synthesis of SPMs which helps resolve inflammation.

"This study suggests that long term n-3 fatty acid supplementation is a potential therapy for limiting the low-grade [inflammation](#) that associates with, and exacerbates, the progression of CKD," she says.

But, she says additional studies of longer duration are needed to examine the effect on [kidney function](#).

The results led to another study examining the effects of n-3 [fatty acids](#) in patients with high blood pressure and are overweight, and consequently were at a higher risk of [cardiovascular disease](#).

The study, published in *Clinical Nutrition* journal, received a grant from the National Health and Medical Research Council of Australia and the Hollywood Private Hospital research foundation.

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