

<http://medicalresearch.com/heart-disease/protein-irisin-linked-to-muscle-wasting-and-atherosclerosis-in-dialysis-patients/16822/>

MedicalResearch.com Interview with:

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Medical Research: What is the background for this study? What are the main findings?

Dr. Tae-Hyun Yoo: Sarcopenia, reduction in muscle mass, is frequently observed in PEW and is prevalent in chronic kidney disease (CKD) patients. In ESRD patients, sarcopenia is significantly associated with greater mortality. Skeletal muscles produce and release myokines, which suggested to mediate their protective effects. Irisin, a novel myokine, has been introduced to drive [brown-fat](#) -like conversion of white adipose tissue and has beneficial effects of skeletal muscle on energy homeostasis and glucose metabolisms. Therefore, we hypothesized that irisin had significant association with sarcopenia and cardiovascular disease in dialysis patients. In peritoneal dialysis patients, serum irisin was positively correlated with mid-arm muscle circumference and thigh circumference. In addition, serum irisin was a significant independent predictor for carotid atherosclerosis even after adjustment for high-sensitivity C-reactive protein in these patients. This study demonstrated that serum irisin was significantly associated with sarcopenia and carotid atherosclerosis in peritoneal dialysis patients.

Medical Research: What should clinicians and patients take away from your report?

Dr. Tae-Hyun Yoo: Malnutrition and chronic inflammation have been proposed to explain the significant association between sarcopenia and cardiovascular disease in (end stage renal disease) ESRD population. Lower muscle mass might reflect poor nutritional status and higher degrees of unopposed inflammation. In addition to these factors, a myokine could be a contributor. In this study, irisin as a myokine could be helpful for stratifying risk of sarcopenia and carotid atherosclerosis in [peritoneal dialysis](#) patients. In addition, present study suggested muscle is an another important organ for protection and modulating

cardiovascular diseases in dialysis population.

Medical Research: What recommendations do you have for future research as a result of this study?

Dr. Tae-Hyun Yoo: A study with follow-up carotid ultrasound and measurement of anthropometric indices and serum irisin is necessary to clarify the association of irisin, sarcopenia, and cardiovascular disease. Therefore, the impact of irisin on future cardiovascular outcomes should be clarified in the future study. The effect of the intervention using exercise training on irisin, sarcopenia, and cardiovascular disease might be also worth investigating in dialysis patients.

Citation:

Irisin, a novel myokine is an independent predictor for sarcopenia and carotid atherosclerosis in dialysis patients

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