J Nutr Food Sci 2018, Volume 8
DOI: 10.4172/2155-9600-C10-081

Are high protein diets effective on renal function?

Hulya Yardimci, Nazli Nur Aslan and Ayse Ozfer Ozcelik
Ankara University, Turkey

Protein or amino acid loading causes an increase in renal blood flow and glomerular filtration rate. Hyper filtration in glomerular accelerates the development of chronic kidney disease. For this reason, it is thought that high protein intake may be harmful to the kidneys. Studies on the subject have focused on the effect of protein amount and duration of consumption on renal function. In short-term studies on hypertension, type-2 diabetes and aged people, high protein intake was found to have an impact on glomerular filtration rate and urine albumin excretion and it was determined that this effect depends on the age in healthy people. However, when individuals with prehypertension or first stage hypertension were given high protein for six weeks, it was reported that there may be adverse effects on kidney function in long-term due to a significant increase in cystatin. In a long-term study on adult pigs, the glomerular filtration rate was significantly higher in pigs fed with high protein (35.0% of the energy) compared to those fed with normal protein (15.0% of the energy) at the end of the fourth month and proteinuria was observed in pigs in the group fed with high protein. However, at the end of the eighth month, previously observed results were not obtained between the two groups. In animal experiments, glomerular hyper filtration and hyper perfusion have been suggested to cause glomerular injury and progressive chronic nephropathy. In another study, creatinine clearance increased by 5-10% at 3 and 12 months in healthy individuals who consumed a high protein diet for two years. The increase in obesity rate has been used for many years with the positive effect of high protein diets on body weight loss. However, besides there are not certain data on the effects of high protein diets, there is no universally accepted definition for high protein intake and long-term human intervention studies are limited. It is believed that there is a need for new studies to address concerns about this issue.

hulyardimci@gmail.com

Notes: