

Protein and Renal Function The federal Dietary Guidelines for Americans recommend an amount of 0.8 g/kg/body wt/d dietary protein intake for healthy adults [19]. Although LPDs provide direct benefits to CKD patients, healthcare professionals are concerned about protein–energy malnutrition and protein–energy wasting (PEW) in CKD patients due to inadequate energy intake [26,27]. The Modification of Diet in Renal Disease (MDRD) was the largest RCT to examine the hypothesis that dietary protein restriction delays the progression of CKD [PMID 10541304]. This study concluded that an HPD might increase SNGFR and induce glomerular hyperfiltration; however, this study is unique by identifying that the analysis of human SNGFR is an exemplary parameter to alterations in renal hemodynamics at the single–nephron level [24]. HPDs induce glomerular hyperfiltration, hyperemia, and increased hydraulic pressure, resulting in vasodilation of the afferent arteriole [22]. HPDs contribute to progressive glomerular damage, which, combined with the renal deterioration from diseased kidneys may contribute to CKD progression. Oba et al. collected 43 healthy (non–diseased) kidneys from live human donors to examine the effect of an HPD on the single–nephron GFR (SNGFR) [24]. Proteinuria declined by 20–50% in CKD [patients who adhered to a LPD [26,27]