

The prevalence of obesity is increasing in patients with chronic kidney disease (CKD), as it is in the general population. The relationship between obesity and its impact on CKD is complex and multi-factorial. Obesity is an independent risk factor for both the development of early CKD and for end-stage CKD requiring renal replacement therapy. Yet, once patients require dialysis, obesity appears to improve survival in haemodialysis, but not peritoneal dialysis patients.

It is becoming clearer that it is factors related to adipose tissue and/or cell biology are at the heart of the relationship between obesity and CKD. Proposed mechanisms independently associated with obesity that contribute to the development of CKD include secretion of adipokines, including leptin and adiponectin from adipose tissue, insulin resistance, inflammation, oxidative stress, endothelial dysfunction and disturbances in the renin-angiotensin system. These obesogenic and uremic factors may contribute to the elevated risk of cardiovascular disease (CVD) in CKD patients, as this risk is greater than that explained by traditional risk factors alone.