

Obesity Triples Chronic Renal Failure Risk

Chronic renal failure is an escalating health problem throughout the world.

REVIEWED BY ELISABETH EJERBLAD, MD

Obesity is an important and potentially preventable risk factor for chronic renal failure (CRF), according to a study in the *Journal of the American Society of Nephrology*.

“Our results confirm an accumulating body of clinical and experimental data implicating obesity as an important causative factor in kidney disease, said Elisabeth Ejerblad, MD, of Uppsala University, Sweden, lead author of the study.

NEEDED RESEARCH ON LINK BETWEEN OBESITY, CRF

The investigators said few large-scale epidemiologic studies have quantified the possible link between obesity and CRF. They analyzed anthropometric data on 926 patients from a nationwide, population-based, case-control group of patients with incident, moderately severe CRF. A group of 989 participants with normal kidney function was studied for comparison.

Included patients were all native Swedes who were aged 18 to 74 years, had CRF and whose serum creatinine levels for the first time and permanently exceeded 3.4 mg/dL (men) or 2.8 mg/dL (women) during the study period. Face-to-face interviews, supplemented with self-administered questionnaires, provided information about anthropometric measures and other lifestyle factors, the investigators wrote.

Logistic regression models with adjustments for several cofactors estimated the relative risk for CRF in relation to body mass index (BMI). Overweight (BMI ≥ 25 kg/m²) at age 20 years was associated with a significant threefold excess risk for CRF, relative to BMI < 25 kg/m². Obesity (BMI ≥ 30 kg/m²) among men and morbid obesity (BMI ≥ 35 kg/m²) among women anytime during lifetime was linked to three- to fourfold increases in risk, according to their abstract.

STRONGEST ASSOCIATION WITH NEPHROPATHY

The strongest association for obesity was with diabetic nephropathy, but two- to threefold risk elevations were observed for all major subtypes of CRF. Analyses that were confined to strata without hypertension or diabetes revealed a threefold increased risk among patients who were overweight at age 20 years, whereas the twofold observed risk elevation among those who had a highest lifetime BMI of > 35 kg/m² was statistically nonsignificant.

Because of the high rates of end-stage renal disease and death, it is imperative to identify treatable causes.

The investigators concluded that obesity seems to be an important — and potentially preventable—risk factor for CRF. Although hypertension and type 2 diabetes are important mediators, additional pathways may also exist.

In an American Society of Nephrology news release, Dr. Ejerblad said, “Chronic renal failure is an escalating health problem throughout the world. Because of the high rates of end-stage renal disease and death, it is of the utmost importance to identify potentially preventable causes of CRF.” ■

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Ejerblad E, Fored CM, Lindblad P, et al. Obesity and risk for chronic renal failure. Online access before publication. *American Society of Nephrology* 2006. doi: 10.1681/ASN.2005060638.