

disease (ESRD), results of a retrospective analysis of data from a voluntary annual health assessment program in Northern California indicate that men and women who are overweight or obese have an increased risk of developing ESRD. The large sample size and long follow-up of this investigation could make it the most accurate to date.

The analysis included 320,252 adults (aged ≥ 18 years) without pre-existing ESRD. Median follow-up was 25 years. After adjusting for confounding factors including age, gender, race, blood pressure and presence of diabetes, the relative risk of developing ESRD increased from 1.0 to 4.99 (95% CI 3.77–6.60; $P < 0.001$) as baseline BMI increased from 18.5 kg/m² (normal weight) to ≥ 40 kg/m² (severely obese). Even for people who were overweight but not obese (BMI 25.0–29.9 kg/m²) the risk of developing ESRD was 72% greater than for those of normal weight.

The findings of the present study indicate that the mechanism connecting BMI and ESRD might be independent of diabetes and hypertension, although there were insufficient data on potentially confounding antihypertensive and antidiabetic medications to confirm this. The importance of any association between the two ever-worsening health epidemics of obesity and ESRD should not be overlooked. The researchers call for concerted efforts to reduce the incidence of obesity, which might in turn curb growth of the ESRD population.

Rachael Williams

Original article Hsu CY *et al.* (2006) Body mass index and risk for end-stage renal disease. *Ann Intern Med* 144: 21–28

Adjustment of serum creatinine values should be standardized in MDRD calculations

Guidelines suggest referral to a nephrologist if glomerular filtration rates (GFRs) fall below 60 ml/min/1.73 m². The most widely recommended tool for estimating GFRs, the abbreviated MDRD EQUATION, is based on serum creatinine values determined using the Beckman Astra 8 method. Van Biesen *et al.* show that measuring serum creatinine using other methods can lead to worrying variation in MDRD-based estimations of GFR, even when correction formulas are used.

Four laboratories provided a set of MDRD-based estimates of GFR and the uncorrected serum creatinine values ($n = 10,108$) on which the estimates were based. A further 10,617 serum creatinine values were extracted from the BIRNH DATABASE. Data from each source were derived using a different serum creatinine assay. The authors corrected these serum creatinine values to Beckman standards using four published formulas, and recalculated GFRs using the MDRD equation.

Calculated GFRs varied when different correction formulas were used. These variations persisted when patients were stratified by disease severity according to K/DOQI CRITERIA ($P < 0.0001$). Based on their corrected recalculations, the authors determined that the number of patients who should have begun renal replacement therapy in Flanders between 2000 and 2005 far exceeded the actual figure (230–350 vs 12–14 per 100,000 residents).

It is clear that identification of patients in need of treatment, and thereby accurate prediction of future disease burden, requires a worldwide standardization of serum creatinine measurement if estimates of GFR continue to be widely relied upon.

Pippa Murdie

Original article Van Biesen W *et al.* (2006) The importance of standardization of creatinine in the implementation of guidelines and recommendations for CKD: implications for CKD management programmes. *Nephrol Dial Transplant* 21: 77–83

Home-based treatment of Fabry disease with α -galactosidase A

Fabry disease is an X-linked disorder of glycosphingolipid accumulation, caused by α -galactosidase A (α -Gal A) deficiency and associated with renal dysfunction. Clinic-based supplementation with recombinant human α -Gal A (e.g. agalsidase- α) is safe and effective in the short term. New results show that patient-directed enzyme replacement also safely slows progression of renal disease in the long term.

In Schiffmann *et al.*'s open-label, 4–4.5-year extension of a 6-month randomized, placebo-controlled trial, 22 of 25 male patients transitioned to nurse-supervised home infusions of 0.2 mg/kg agalsidase- α . For most patients, estimated glomerular filtration rates remained relatively stable during the study; only men who had stage III chronic kidney disease at baseline

GLOSSARY

MDRD EQUATION

Modification of Diet in Renal Disease equation; used to estimate glomerular filtration rate based on serum creatinine measurements

BIRNH DATABASE

A population-based data set of the Belgian Interuniversity Registry on Nutrition and Health

K/DOQI CRITERIA

National Kidney Foundation guidelines for staging chronic kidney disease according to level of kidney function; ranges from stage 1 (kidney damage with normal or increased GFR [≥ 90 ml/min/1.73 m²]) to stage 5 (kidney failure [GFR < 15 ml/min/1.73 m² or dialysis])