

# 12<sup>TH</sup> GLOBAL NEPHROLOGISTS ANNUAL MEETING

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## The pathophysiology of essential hypertension in young/middle-age, and treatment implications

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Essential hypertension is a major global risk factor for premature death. The Framingham Group have shown that the appearance of diastolic hypertension is linked to: a) Young/middle age, b) Obesity. Central obesity is associated with high sympathetic nerve activity (SNA) (via high blood insulin/leptin levels acting upon the hypothalamus). High SNA, independent of BP is associated with premature cardiovascular death in middle-age. Antihypertensive agents that increase SNA, e.g., diuretics, dihydropyridine calcium blockers, and ARBs, do not reduce (and may increase) the risk of cardiovascular death in younger/middle-aged hypertensive subjects. The first-line choice of antihypertensive drug in such cases should be either beta-blockade or ACE-I. Guide-line Committees around the world are confused on this issue.

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## The association between physical activity and mortality among patients undergoing maintenance hemodialysis

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The aim of this study was to assess whether physical activity can predict mortality in patients undergoing maintenance hemodialysis (MHD). This observational study enrolled 317 patients undergoing MHD from Shanxi Provincial People Hospital and the Second Affiliated Hospital of Xi'an Medical University from February to June 2012. Physical activity was measured by using the Human Activity Profile (HAP) and the Stanford 7-day Physical Activity Recall Questionnaire (PAR). Exercise or not, maximal activity score (MAS), adjusted activity score (AAS), light physical activities, moderate physical activities, and the PAR value were significantly associated with mortality among patients undergoing MHD. The patients with higher scores of MAS, AAS and PAR value; more hours of the light physical activities; and moderate physical activities have the lower mortality. Through multivariate Cox regression analysis, adjusting for age, MAS, PAR value and light physical activities can predict the mortality among patients undergoing MHD ( $P < .05$ ), and the relative risk values were 0.44, 0.69 and 0.66 respectively. Baseline physical activities are independent predictors of mortality in patients undergoing hemodialysis.

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