

**Cohn, J., Levine, T., Oliveri, M., Garberg, V., Francis, G., Simon, A., Rector, T.**  
**Plasma norepinephrine as a guide to prognosis in patients with chronic congestive heart failure.**

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Hemodynamics, plasma norepinephrine, and plasma renin activity were measured at supine rest in 106 patients (83 men and 23 women) with moderate to severe congestive heart failure. During follow-up lasting 1 to 62 months, 60 patients died (57 per cent); 47 per cent of the deaths were sudden, and 45 per cent were related to progressive heart failure. Statistically unrelated to the risk of mortality were cause of disease (60 patients had coronary disease, and 46 had cardiomyopathy), age (mean, 54.8 years), cardiac index (mean, 2.11 liters per minute per square meter of body-surface area), pulmonary wedge pressure (mean, 24.5 mm Hg), and mean arterial pressure (mean, 83.2 mm Hg). A multivariate analysis of the five significant univariate prognosticators--heart rate (mean, 84.4 beats per minute), plasma renin activity (mean, 15.4 ng per milliliter per hour), plasma norepinephrine (mean, 700 pg per milliliter), serum sodium (mean, 135.7 mmol per liter), and stroke-work index (mean, 21.0 g-meters per square meter)--found only plasma norepinephrine to be independently ( $P = 0.002$ ) related to the subsequent risk of mortality. Norepinephrine was also higher in patients who died from progressive heart failure than in those who died suddenly. These data suggest that a single resting venous blood sample showing the plasma norepinephrine concentration provides a better guide to prognosis than other commonly measured indexes of cardiac performance.