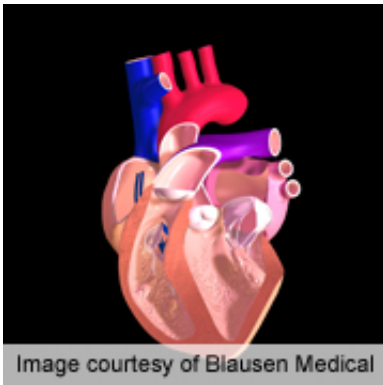


# Pre-load stress echo benefits heart failure prediction

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(HealthDay)—Pre-load stress echocardiography using leg-positive pressure (LPP) provides additional prognostic information beyond that provided by conventional Doppler echocardiography at rest in cases of mild heart failure, according to a study published online June 18 in *JACC: Cardiovascular Imaging*.

Hirotsugu Yamada, M.D., Ph.D., from Tokushima University Hospital in Japan, and colleagues performed transthoracic echocardiography with LPP in 202 [patients](#) with chronic cardiac disease. Patients were categorized based on left ventricular (LV) diastolic dysfunction using transmitral flow velocity as: restrictive or pseudonormal (PN) at [rest](#), impaired relaxation (IR) at rest and during LPP (stable IR), and IR at

rest and PN during LPP (unstable IR).

The researchers found that LPP increased LV end-diastolic pressure from 15.8 to 20.5 mm Hg in the unstable IR group and from 10.5 to 14.7 mm Hg in the stable IR group (both P group (P = 0.81). Similarly, in the unstable IR group event-free survival was significantly lower versus in stable IR (P = 0.003). Unstable IR was an independent predictor of all-cause cardiac events (hazard ratio: 8.0; P

"Pre-load stress echocardiography using LPP provides additional prognostic information in mild [heart failure](#) beyond that provided by conventional Doppler echocardiography at rest," the authors write.

**More information:** [Abstract](#)  
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