



# Mild pulmonary hypertension and premature mortality among 154 956 men and women undergoing routine echocardiography

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**Mild pulmonary hypertension (as indicated by estimated right ventricular systolic pressure 30.0–39.9 mmHg) is associated with increased risk of all-cause mortality and a substantial component of premature mortality** <https://bit.ly/3ytwIEP>

**Cite this article as:** Stewart S, Chan Y-K, Playford D, *et al.* Mild pulmonary hypertension and premature mortality among 154 956 men and women undergoing routine echocardiography. *Eur Respir J* 2022; 59: 2100832 [DOI: 10.1183/13993003.00832-2021].

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This article has supplementary material available from [erj.ersjournals.com](http://erj.ersjournals.com)

This article has an editorial commentary: <https://doi.org/10.1183/13993003.02064-2021>

Received: 21 March 2021  
Accepted: 16 May 2021

## Abstract

**Background** Although mild pulmonary hypertension is known to be associated with increased mortality, its impact on premature mortality is largely unknown.

**Methods** We studied the distribution of estimated right ventricular systolic pressure (eRVSP) among a total of 154 956 adults with no evidence of left heart disease investigated with echocardiography. We then examined individually linked mortality, premature mortality and associated life-years lost (LYL) according to eRVSP levels.

**Results** The cohort comprised 70 826 men and 84 130 women (aged 61.3±17.7 and 61.4±18.4 years, respectively). Overall, 85 173 (55.0%), 49 276 (31.8%), 13 060 (8.4%) and 7447 (4.8%) cases had eRVSP levels indicative of no (<30.0 mmHg), mild (30.0–39.9 mmHg), moderate (40.0–49.9 mmHg) or severe (≥50.0 mmHg) pulmonary hypertension, respectively. During a median (interquartile range) 5.7 (3.2–8.9) years of follow-up, 38 456/154 986 (24.8%) individuals died. Compared with eRVSP <30.0 mmHg, age and sex-adjusted hazard ratios for all-cause and cardiovascular-related mortality were 1.90 (95% CI 1.84–1.96) and 1.85 (95% CI 1.74–1.97), respectively, for eRVSP 35.0–39.9 mmHg. Overall, 6256 (54%) men and 7524 (55%) women died prematurely. As a proportion of all deaths, premature mortality rose from 46.7% to 79.2% among those with eRVSP <30.0 *versus* ≥60.0 mmHg with a mean of 5.1–11.4 LYL each time. However, due to more individuals affected overall, eRVSP 30.0–39.9 mmHg accounted for 58% and 53% of total LYL among men (40 606/70 019 LYL) and women (47 333/88 568 LYL), respectively.

**Conclusions** These data confirm that elevated eRVSP levels indicative of mild pulmonary hypertension are associated with increased risk of death. Moreover, this results in a substantive component of premature mortality/LYL that requires more proactive clinical surveillance and management.