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## Physical activity and mortality risk in people with interstitial lung disease: a systematic review and meta-analysis

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### Abstract

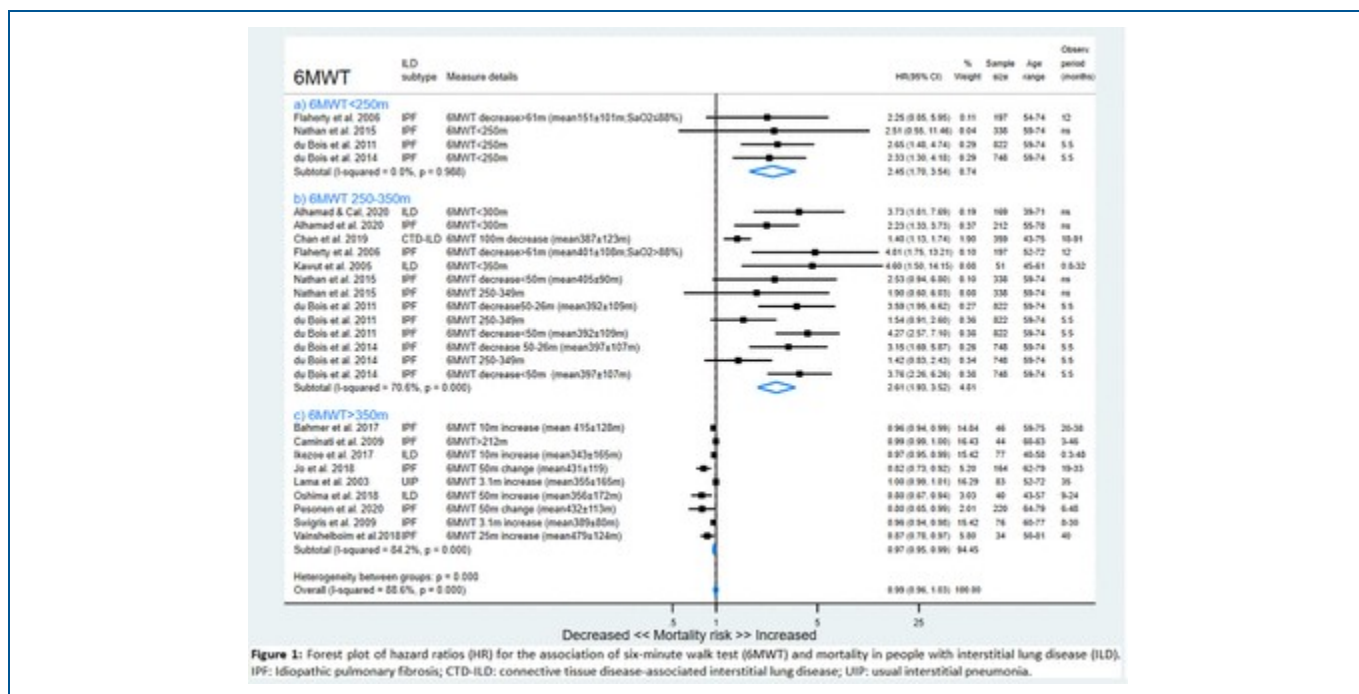
**Introduction:** Physical activity (PA) might be a protective factor for mortality in people with interstitial lung disease (ILD), but evidence is widespread in the literature. This study summarises evidence on the association of PA measures and mortality in people with ILD.

**Methods:** PubMed, Scopus, Web of Science and EBSCO databases were searched. Two authors independently selected studies for inclusion, extracted data and assessed risk of bias. A meta-analysis for each PA measure was conducted using inverse variance-weighted averages of logarithmic hazard ratios (HR) in random-effects models.

**Results:** 48 studies were included with data from 8874 people with ILD [mean age:64±9years; 67%men; 83%IPF; mean DLCO:48.2±15.5%predicted]. Studies' follow-up period ranged from 23days-15.5years. The 3-most reported PA measures associated with mortality risk were six-minute walk test (6MWT) (n=39), oxygen uptake, peak or maximal (n=9) and workload in watts (W) (n=5). 23 studies were included in the meta-analyses. People walking less than 350-meters in 6MWT had more than twofold risk of premature mortality (Figure 1); and those showing an increase of 10% of predicted or between 10-20W in workload showed a 12% lower risk of

mortality.

**Conclusion:** PA measures predict risk of mortality in people with ILD and may be useful to guide clinical decision-making.



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Idiopathic pulmonary fibrosis      Physical activity

## Footnotes

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This abstract was presented at the 2021 ERS International Congress, in session “Prediction of exacerbations in patients with COPD”.

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Ana Alves et al., European Respiratory Journal

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Khouloud Kchaou et al., European Respiratory Journal

Normoxemic patients at rest with Interstitial Lung Disease and desaturation in the 6MWT

David Jorge Araújo Barros Coelho et al., European Respiratory Journal, 2019

Anti-melanoma differentiation-associated gene 5 (MDA-5) linked Interstitial Lung Disease: A poor prognostic factor

Purdon et al., Journal of Precision Respiratory Medicine, 2018

Association of serum tumor markers with interstitial lung disease in patients with or without connective tissue disease: A cross-sectional study

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Ho So et al., World Scientific Book, 2019

Association of Preexisting Interstitial Lung Abnormalities With Immune Checkpoint Inhibitor-Induced Interstitial Lung Disease Among Patients With Nonlung Cancers

Kiyofumi Shimoji et al., JAMA Network Open, 2020

Home Oxygen Therapy for Adults With Chronic Obstructive Pulmonary Disease or Interstitial Lung Disease

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