Grip Strength: The Next Vital Sign for Respiratory Disease

Imagine if a simple handshake could offer powerful insights into someone's vitality and overall health.

This isn't just a metaphor—grip strength is rapidly emerging as an indispensable data point for assessing and monitoring longevity and patients with complex health conditions.

Grip strength is a simpler, more objective measure than the 6-minute walk test, directly correlating with functional capacity and offering valuable insights into respiratory disease risk and progression. It reflects muscle function, which declines in chronic conditions such as COPD, where systemic inflammation and muscle loss worsen physical performance and increase mortality risk. [1]

This document explains how grip strength can be used in clinical practice to assess risk, progression and prognosis in patients with respiratory disease.

> "Grip strength is a key indicator of health; it's a proxy for your overall strength and physical function."
>
> 'Outlive' by Peter Attia MD; Longevity Expert

Must-Know Metrics

Risk of Disease Incidence

Patients aged between 40-69: each 7.7 lbs* drop in grip strength increases respiratory–disease related incidence of:

- Respiratory system disease by 22% in women and 17% in men.
- COPD by 20% in women and 15% in men [1]

Prediction and Prevention of Mortality

If you are aged between 40-69: each 7.7 lbs* drop in grip strength increases respiratory–disease related mortality of:

- Respiratory system disease by 31% in women and 24% in men.
- COPD by 2% in women and 19% in men [1]

Achieving a grip strength of 62.4 lbs* reduces the risk of respiratory disease mortality by an impressive 51%. [2]

*Note that all cut off points have been converted to GripAble-equivalent measurements for consistency

Citations:
[1] Celis-Morales et al., 2018 [2] Mey et al., 2022

Impact

For clinicians, grip strength offers early insight into disease risk, progression and prognosis, enabling faster, more targeted interventions.

Patients benefit from early detection of hidden risks, enabling preventative, proactive care that can improve health outcomes.

For the healthcare system, it presents a cost-effective tool that supports population risk stratification, resource allocation, and efficient care delivery.

Grip Strength in Practice

Clinical Application

Measure grip strength during routine check-ups to assess risk factors and track trends over time. For high-risk patients, consider providing a hand dynamometer for regular, at-home monitoring. Pay attention when grip strength drops below cut-off points or decreases by more than a quartile.

Patient Empowerment

Give patients access to their grip strength scores—a clear, tangible measure they can easily understand and actively improve with guidance. Unlike blood pressure, grip strength is relatable and empowering, enabling patients to track their progress as a key indicator of their independence.

Practical Considerations

Grip strength is a non-invasive, objective measure offering clear insights into patient well-being and can serve as a valuable substitute for patients unable to perform respiratory assessments.

What next?

Explore

Dive into our extensive collection of studies on grip strength and respiratory disease here.

Understand

Get the essentials on hand dynamometry and how to integrate grip strength into your practice with our guide.

Implement

Discover how Able Assess can enhance grip strength evaluation and streamline assessments in your practice.

Contribute

Partner with us in research or patient case studies to advance the knowledge of grip strength as a biomarker.

Get in touch via email to hello@able-care.co or visit our website at www.able-care.co