



# Grip Strength: The New Essential Biomarker for Heart 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 has emerged as an indispensable data point for assessing and monitoring longevity and patients with complex health conditions.

The measurement of grip strength in patients with heart disease offers a quick, non-invasive assessment of cardiovascular health, and a stronger predictor of death than blood pressure. It reflects muscle mass and strength, which is closely linked to cardiovascular function. Low grip strength often signals reduced muscle mass and poor fitness, common in heart disease due to inflammation, reduced blood flow, and weakened heart function.

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

## Must-Know Metrics

### Prediction of Increased Risk

For adults aged between 35-70 each 7.7 lbs\* drop in grip strength is linked to a 16% higher risk of dying from any cause, a 17% higher risk of dying from cardiovascular disease, a 9% higher risk of stroke, and a 7% higher risk of heart attack. [1]

### Prediction of Mortality and Heart Disease

Grip strength is proven to be a better predictor of all-cause and cardiovascular mortality than systolic blood pressure. [1]

Including grip strength in a risk score (alongside age, sex, diabetes status, BMI, blood pressure, and smoking) improves the accuracy of predicting death and heart disease. [2]

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

Citations:

[1] [Leong et al., 2016](#) [2] [Celis-Morales et al., 2018](#)

[3] [Lee et al., 2024](#)

# 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

- The study by Leong et al., [1] in The Lancet revealed that grip strength is a stronger predictor of death and cardiovascular disease than blood pressure, even when accounting for age, smoking, and exercise habits. This makes grip strength a powerful tool for assessing and managing health risks related to heart disease and overall mortality.
- The CardioRACE trial [3] found that aerobic exercise, or a combination of resistance and aerobic exercise, enhances cardiovascular health, while resistance exercise alone does not.
- Grip strength provides a less invasive alternative for remote health monitoring when blood pressure tracking is challenging.

## Impact



**Reduce Utilization:** better prediction, risk stratification, and monitoring



**Improve Patient Satisfaction:** give patients a quick, non-invasive tool to monitor disease status and response to treatment at home



**Support Risk Adjustment:** quantify disease impact by using grip strength as an objective measure of muscle loss.

## What next?

### Explore

Dive into our extensive collection of studies on grip strength and heart 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](mailto:hello@able-care.co) or visit our website at [www.able-care.co](http://www.able-care.co)