Grip Strength: The New Essential Biomarker for Gastrointestinal Disease

ABLE CARE

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.

Grip strength is a valuable indicator of functional health in patients with gastrointestinal (GI) diseases such as irritable bowel syndrome and Crohn's Disease, as it reflects muscle mass and strength compromised by malnutrition, inflammation, and metabolic changes. Chronic inflammation and malnutrition in GI disorders lead to systemic muscle wasting which is reflected by a reduced grip strength.

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

Must-Know Metrics

Risk of Hospitalisation

Individuals with a reduced grip strength and pre-existing diagnosis of inflammatory bowel disease (IBD), are 3.96 times more likely to have an inflammatory bowel disease related hospitalization (disease flare, surgery, or infection) than those with grip strength above the cutoff (<24.3 lbs* for females and <41.0 lbs* for males). [1]

Decreased Risk of Gastrointestinal Disease

The UK biobank cohort study systematically assessed the association between grip strength with a spectrum of 24 different gastrointestinal diseases. [2]

• For healthy adults presenting with a grip strength in the lowest third, an increase of 12.1 lbs* is significantly associated with a decreased risk of 16 gastrointestinal diseases by 6 - 20%.

• For healthy adults presenting in the middle third, (mean grip strength 47.8lbs*) an increase in 12.6 lbs* is significantly associated with a decreased risk of 16 gastrointestinal diseases by 6 - 20%.

• For healthy adults presenting in the upper third (mean grip strength 59.5 lbs*) an increase in 15.7 lbs* is significantly associated with a decreased risk of 16 gastrointestinal diseases by 6 - 20%.

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

Citations:
[1] Bedard et al., 2023 [2] Dan et al., 2024

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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

Use grip strength as a first-line test for objective assessments, guiding and supporting the interpretation of more invasive tests.

Impact

Reduce Utilization:

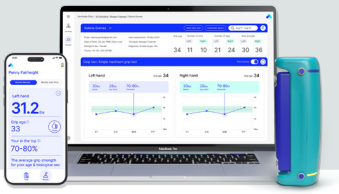
better risk stratification and monitoring.

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 measurement of patient nutritional status and full body strength.



What Next?

Explore: Dive into our extensive collection of studies on grip strength and gastrointestinal disease here.

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

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

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

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