

GRIPABLE

SERIOUS. FUN. REHAB.




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Empowering hand and arm therapy



“This is one of the most innovative and versatile evaluation and treatment interventions in the world of rehabilitation today.”

Jim Wagner OTD, OTR/L, CHT, CPAM, CSCS.
Occupational Therapist and Certified Hand Therapist

GripAble is a smart, two-in-one assessment and training device for people with impaired hand, wrist or arm movement.

The handheld GripAble device connects to an app on a tablet, where the user can be assessed and play a range of engaging games and activities that focus on different aspects of grip, hand and wrist movement.

Through these fun and engaging activities, GripAble helps individuals to stay motivated with their rehab.

GripAble was designed with remote rehab at its heart and enables ongoing hand and arm training at home.

Therapists can set daily goals and assess an individual's activity against these goals. Users get real-time feedback on their performance and can save and send their activity reports to their therapist.

KEY BENEFITS

- Gamification of rehab is proven to help engagement, motivation, and adherence
- Repetition training for neuro-rehab is strongly supported
- Custom-made activities to meet clinical goals of increasing range of movement, grip, and pinch strength
- Multiple activity levels to grade the patient
- Assess each individual's ability and then set the activities to match their ability, adjusting as they progress
- Physical and cognitive goals can be addressed
- Smooth transition from clinic to home
- Track your patients' activity remotely
- Lightweight and portable
- Real-time feedback and reports

GRIPABLE PRO FOR THERAPISTS

- GripAble device with straps
- Tablet and software app
- Activities, data and reports
- Assessments
- Software updates included
- Multiple therapist logins
- Unlimited patient logins

GRIPABLE GRIP ASSESSMENT



- Five grip assessments currently available, exploring different aspects of grip
- On screen instructions provide standardisation of position, process and verbal narration
- All tests possible in isometric and isotonic modes
- Pre-calculated results including mean and standard deviation
- Results collated into reports
- Follows ASHT assessment recommendations

GripAble is a two-in-one assessment and training device for a broad range of hand and upper extremity conditions. Combining a highly affordable assessment tool with a captivating training device, GripAble connects to an app on a tablet, with fun and engaging activities that train core hand and wrist movements.

As a therapist, you can objectively and precisely measure an individual's grip strength and track changes over time. Movement and strength are assessed, and games calibrated to the individual, so as the user improves, so does the challenge.

Publications referenced

Mutalib, S.A., Mace, M., Seager, C. et al. (2022) 'Modernising grip dynamometry: Inter-instrument reliability between GripAble and Jamar'. BMC Musculoskeletal Disorders

Mace, M. et al. (2022) 'GripAble: An accurate, sensitive and robust digital device for measuring grip strength', Journal of Rehabilitation and Assistive Technologies Engineering.

GRIPABLE

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MODERNISING THE DYNAMOMETER FOR GRIP ASSESSMENT

Excellent
correlation with
Jamar ICC 0.90

Highly robust to
drops over 1.5 m

High accuracy
within 2 Kg

Outstanding
sensitivity
within 100 g

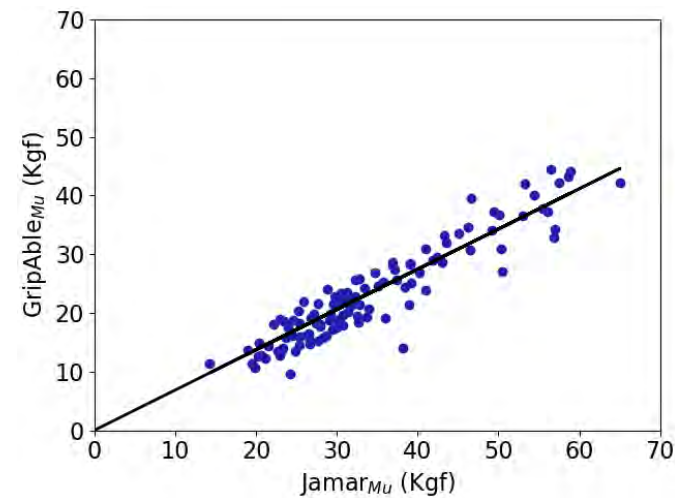


Here we present a summary of findings from a set of experiments to show the sensitivity, accuracy and robustness of GripAble as well as the correlation with the Jamar dynamometer.

Detailed data is found in the two publications listed on back page.

EXCELLENT CORRELATION WITH JAMAR

- **Inter-device reliability shown by intraclass correlation coefficient**
- **Excellent correlation (ICC = 0.90)**
- **0.7 Kg on GripAble = 1 Kg on Jamar**
Difference likely due to different shape, size, and weight of devices
- **Normative data sets to follow**

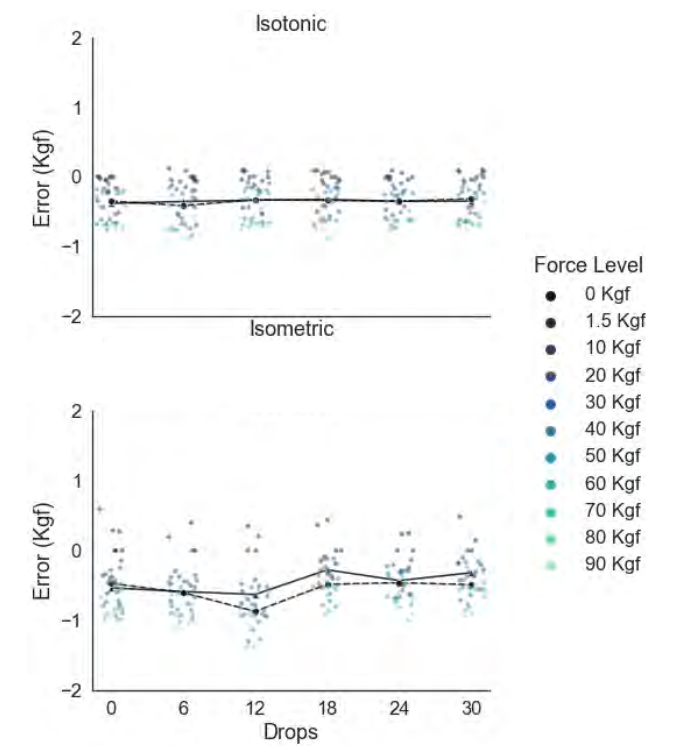


GRAPH Comparison of Grip strength recorded on GripAble and Jamar across 61 adults (122 hands).



HIGHLY ROBUST MEASUREMENT

- **Minimal change in error** (less than 2 Kg in all isotonic drops) **even as number of drops increases**
- **Across all drops, the error was within +/- 1 Kg in isotonic mode and +/- 1.5 Kg in isometric mode**

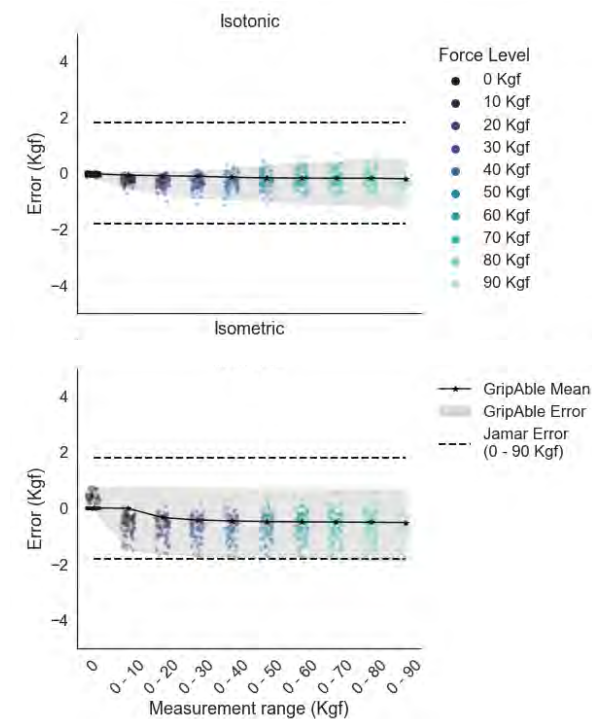


GRAPH Each dot on the graph represents error measured in each of the tested devices (N=2) after a certain number of drops. In total, two GripAbles dropped 30 times from shoulder height (1.5m) onto a hard floor.



HIGH ACCURACY

- **GripAble has superb performance across full scale of 0 to 90 Kg in isotonic mode with most devices demonstrating accuracy within 1 Kg**
- **GripAble has equal performance to Jamar across full scale of 0 to 90 Kg in isometric mode**

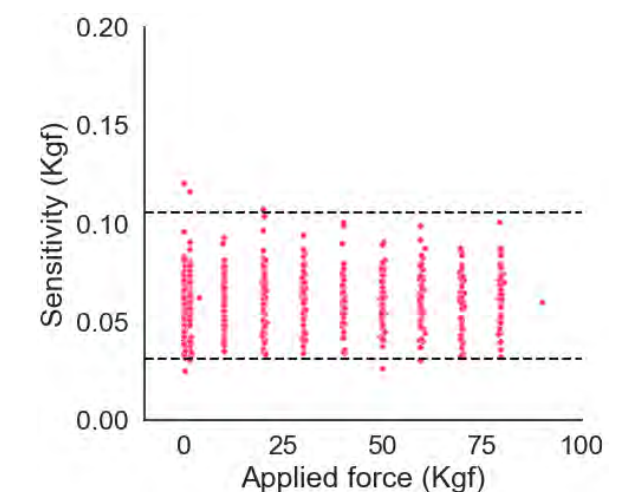


GRAPH Each GripAble device tested at 10 Kg force steps from 0 - 90 Kg. Dotted line shows claimed Jamar error. In total, 47 GripAbles tested in both isometric and isotonic modes.



OUTSTANDING SENSITIVITY

- **Mean sensitivity 60 g**
- **30 - 100 g sensitivity across all devices**
- **High sensitivity carried through all force levels**



GRAPH Sensitivity measured at each force level across 47 GripAbles tested.