
# Functional Abilities Evaluation

**Claimant Name:** Sample Smith

**Claimant #:** 54217

**Date of Evaluation(s):** 10/20/2025

**CONFIDENTIAL INFORMATION ENCLOSED**

**WorkerFacts Clinic**
123 Sample Drive
Phone: 212-111-2222 Fax: 757-273-6198

## Contents of Report:

# Functional Abilities Evaluation

123 Sample Drive

Phone: 212-111-2222 | Email: sarahsample@workerfactsclinic.com

**Report Date:**
10/20/2025

**Sample Smith**

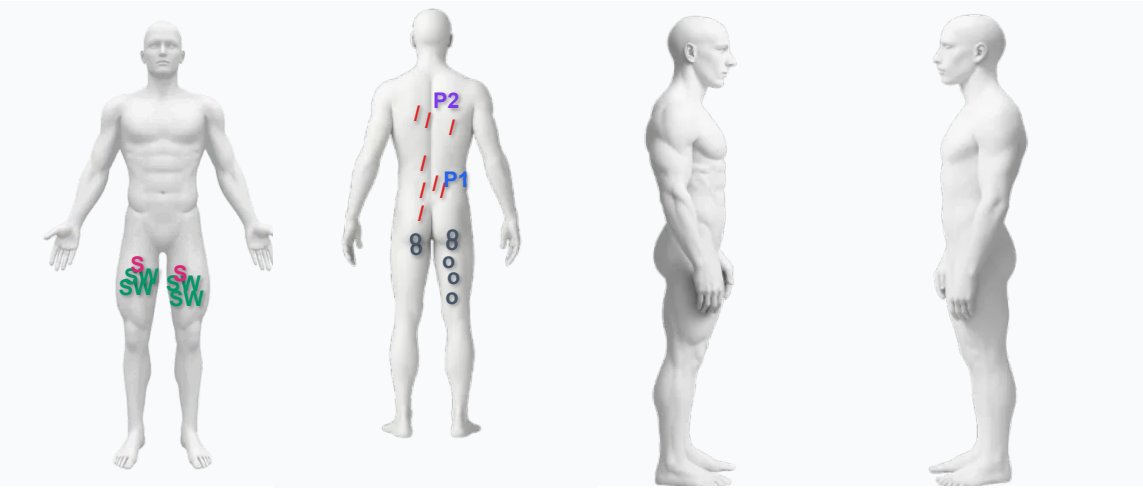
## Client Information

| | | | |
|---|---|---|---|
| **Name:** | Sample Smith | **ID:** | 54217 |
| **Address:** | 9 Winston Place | **DOB (Age):** | 1952-07-29 (73) |
| **Home Phone:** | 444-333-3333 | **Gender:** | male |
| **Work Phone:** | n/a | **Height:** | 173 cm |
| **Occupation:** | Laborer | **Weight:** | 243 lbs |
| **Employer(SIC):** | City of Smithtown | **Dominant Hand:** | right |
| **Insurance:** | ABC Insurance | **Referred By:** | ABC Case Mgmt |
| **Physician:** | ABC Case Mgmt | **Resting Pulse:** | Norm bpm |
| | | **BP Sitting:** | Norm |
| | | **Tested By:** | Sarah Sample, RPT |

## Mechanism and History of Injury

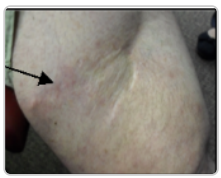
| Date | Description |
|---|---|
| 04/2011 | Lower back injury sustained during construction work on March 10, 2024. Initial treatment included physical therapy and pain management. Patient reports persistent pain and limited mobility affecting daily activities and work capacity. |

## Pain/Symptom Illustration

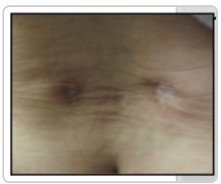



| Area of Primary Concern | |
|---|---|
| **P1** | Primary |
| **P2** | Secondary |
| **Pain Indicator** | |
| **~** | Primary |
| **/** | Shooting |
| **x** | Burning |
| **•** | Pins and Needles |
| **o** | Numbness |
| **General** | |
| **T** | Temperature |
| **SW** | Swelling |
| **S** | Scar |
| **C** | Crepitus |

**Knees**



**Lumbar Area**



**Referral Questions**

**What is the present lumbar range of motion noted for the client?**

| Area Evaluated: | Data: | Valid? | Norm: | % of Norm: |
|---|---|---|---|---|
| Lumbar Flexion | 49 deg | Pass | 60 deg | 82% |
| Lumbar Extension | 28 deg | Pass | 25 deg | 112% |
| Lumbar Lateral Flexion - Left | 27 deg | Pass | 25 deg | 108% |
| Lumbar Lateral Flexion - Right | 25 deg | Pass | 25 deg | 116% |

**Slight decrease in flexion but not a limitation to return to duties.*

**Range of Motion Assessment Documentation:**

**What is the present range of motion noted for the client for the affected area of injury?**

In addition to the Lumbar area the cervical rom measurements are as follows; Cervical Flexion 49 deg Cervical Extension 53 deg Cervical Lateral Flexion - Left 43 deg Cervical Lateral Flexion - Right 44 deg Cervical Rotation - Left 55 deg Cervical Rotation - Right 65 deg.

**What is the present strength noted for the client for the affected area of injury?**

As noted in the body of the report - the client displayed sub-maximal effort during testing and displayed values less than he was able to achieve based on consistency cross checks applied.

**What are the present limitations to returning to full duties in their previous position?**

During the testing the client displayed the ability to perform the following activities; average hand and pinch grip, sufficient dexterity- handling and fine finger movement, average total spine range of motion and extremity range of motion, average balance, ability to kneel, squat, crouch, able to perform extended reach with weight with both arms (10lbs), stair climb and walk with loads, and sit/stand for periods in excess of one hour without break. (Documented during testing and with communication with taxi driver – 1 hour and 15 minute ride with no breaks or client complaints) Client also demonstrated the ability to lift items at the 50lb range from the floor to waist level and from the waist to shoulder level at 35lbs as well as was able to carry 40lbs over distance. Client also displayed the ability to push and pull at norm levels at the 100lb mark. Client was able to twist and turn with a 25lb weight load and participated in sustained posture tests with extended reaching of minimal weights and passed. Based on the job description reviewed, the client has sufficient abilities to perform his job demands for; Refuse Collection, Street Sanitation and City Shop. The only area where there may be a limitation regarding excessive weight loading is in the section of his job known as Street Maintenance (concrete/asphalt/Tree Crew) where he could perform basic repairs without heavy wheelbarrow loading or climbing trees based on weight limitations noted above.

**What accommodations could be made to the workplace to provide increased abilities/comfort to the client based on the present condition?**

The client would not be able to carry the weight loads above 40lbs over distance or 50lbs from the floor level or over 35 lbs. from waist to shoulder or overhead, climb trees or sustain prolonged periods of extended reach with the weight of the chainsaw based on the results of testing. That being said most activities are within guidelines of tested abilities and generally frequent posture changes – every hour or so, with brief seated rests post prolonged digging would be sufficient to increase client comfort

**Was the client consistent and reliable in their efforts?**

The client was unreliable and inconsistent in many areas of the testing process. To determine full abilities level there was significant reliance on distraction testing and symptom magnification crosschecks. The client was without question, providing a “sub maximal effort” during testing activities; Example One: Client was inconsistent with all lumbar movements and displayed the ability to flex at a greater level without discomfort as is noted when he was distracted or for that matter when he drank from the water fountain in the clinic. Example Two: During standard Shoulder Flexion and then Distraction Testing the client displayed inaccurate results. Example Three: Hand Grip Measures in comparison to Rapid Exchange Grip: First of all he failed test/retest consistency and then his values for rapid exchange which should be 15% less to equal standard position 2 were actually more than 200% greater in value. He failed dominance testing and his coefficient of variation scores should be below 12% to be deemed maximal effort – instead they were 15 t0 34%. Example Four: MVE Scales (supposed to be a bell curve shape and instead are not displaying accurate values) Example Five: Pinch Grip imbalance with dominant side and high coefficient of variation scores indicating sub maximal effort applied. Example Six: Inconsistent range of motion measures during testing with digital dual inclinometers – note the ever increasing values for the lumbar flexion and the initial lower measures for the cervical extension.

**Distraction test consistency - When performing distraction tests for sustained posture the client should demonstrate similar limitations and or abilities. Pass/Fail determination:**

**Status:** FAIL

**Comments:**

Example: The client demonstrated consistent movement patterns and effort levels during both standard Shoulder Flexion and Distraction Testing, showing similar ranges of motion, control, and tolerance levels. No significant discrepancies in performance, posture, or reported discomfort were observed between the two tests, indicating reliable effort and valid results. Any minor variations noted appeared to be within normal testing variability.

**Consistency with diagnosis - Based on the diagnosis and complaints of the individual it is expected that those issues would relate to a similar function performance pattern during testing. Pass/Fail determination:**

**Status:** FAIL

**Comments:**

The client exhibited variable pain responses and discomfort patterns that did not correspond with the initial diagnosis or localized injury site. The observed inconsistencies indicate that the functional performance outcomes may not accurately reflect the client's true physical capacity.

**What would be the Physical Demand Classification (PDC) for this client?**

*Sedentary which is in line with full return to duties.

**(L) Light Work**

Exerting up to 20 lb of force occasionally, and/or up to 10 lb of force frequently, and/or a negligible amount of force constantly to move objects. Physical demand requirements are in excess of those for sedentary work. Even though the weight lifted may be only negligible, a job should be rated 'Light Work': (1) when it requires walking or standing to a significant degree; or (2) when it requires sitting most of the time but entails pushing and/or pulling of arm or leg controls; and/or (3) when the job requires working at a production rate pace entailing the constant pushing and/or pulling of materials even though the weight of those materials is negligible. The constant stress and strain of maintaining a production rate pace, especially in an industrial setting, can be and is physically exhausting.

**Additional Comments:** The client would have been able to achieve the Heavy Classification based on the results of the consistency cross checks,however, Medium was observed. * (H) Heavy Work Exerting 50 to 100 lb of force occasionally, and/or 25 to 50 lb of force frequently, and/or 10 to 20 lb of force constantly to move objects, physical demand requirements are in excess of those for medium work.

| Physical Demand Level | OCCASIONAL<br>0-33% of the workday | FREQUENT<br>34-66% of the workday | CONSTANT<br>67-100% of the workday |
|---|---|---|---|
| **Sedentary** | 1 - 10 lbs. | Negligible | Negligible |
| **Light** | 11 - 20 lbs. | 1 - 10 lbs. | Negligible |
| **Medium** | 21 - 50 lbs. | 11 - 25 lbs. | 1 - 10 lbs. |
| **Heavy** | 51 - 100 lbs. | 26 - 50 lbs. | 11 - 20 lbs. |
| **Very Heavy** | Over 100 lbs. | Over 50 lbs. | Over 20 lbs. |

**Physical Demand Assessment Documentation:**


**Conclusions**

The client was overall a below average rating of consistency and reliability for most of the testing. It is the opinion of the evaluator that based on the factual functional evidence presented, that the client is able to perform at a higher level. The client may very well be able to perform at higher weight loads, but refused to participate any further.

Client did indicate that when asked if he could perform any of the duties of his previous job he stated NO – when asked if there was any job in the City he could do he said NO.

Further to the above it should also be noted that the client did not move around in his seat during sitting tolerances or complain of discomfort while seated or after prolonged standing – client did not favor any side during carrying or lifting tests (no arm drop during carrying). No change in gait was noticed post activities during walking which again if present would be usually an indicator of pain involvement post irritation of injured area.

Client was very verbal and upset that his wife would not be allowed to sit with him during the testing versus the translator. This was overcome and the wife of the client remained in the waiting room for the entire time of the evaluation.

**Signature of Evaluator**

Date: 10/20/2025

**Sarah Sample, RPT**

License: FCE123456789

## Functional Abilities Determination and Job Match Results

| Activity Tested | Sit Time | Stand Time | Test Results | Job Description | Job Requirements | Job Match (Yes/No) |
|---|---|---|---|---|---|---|
| Client Interview Test | 45 min | | N/A | Initial assessment and history gathering | Basic interview requirements | Yes |
| Activity Overview | | 5 min | // | General activity overview and preparation | Basic standing and mobility | Yes |
| **Strength** | | | | | | |
| Hand Strength Standard | 5 min | | L=16.0 R=20.7 | Requires frequent lifting of 25-50 lbs materials throughout 8-hour shift. Essential for warehouse operations and material handling tasks. | Within Normal Limits | Yes |
| Hand Strength Rapid Exchange | 5 min | | L=17.5 R=21.7 | Requires frequent lifting of 25-50 lbs materials throughout 8-hour shift. Essential for warehouse operations and material handling tasks. | Within Normal Limits | Yes |
| Pinch Strength Key | 5 min | | L=18.3 R=21.7 | Position requires sustained gripping strength for operating hand tools and equipment. Critical for manufacturing assembly line work. | Target: 25 lbs | Yes |
| Pinch Strength Tip | 5 min | | L=18.2 R=21.8 | Position requires sustained gripping strength for operating hand tools and equipment. Critical for manufacturing assembly line work. | Target: 25 lbs | Yes |
| Hand Strength Mmve | 5 min | | L=17.0 R=22.5 | Position requires sustained gripping strength for operating hand tools and equipment. Critical for manufacturing assembly line work. | Within Normal Limits | Yes |
| Pinch Strength Palmar | 5 min | | L=18.8 R=22.0 | Construction work requiring consistent bilateral strength for tool operation and material manipulation. Safety-critical job function. | Target: 25 lbs | Yes |
| Dynamic Frequent Lift Mid | | 5 min | 17.3 weight | Construction work requiring consistent bilateral strength for tool operation and material manipulation. Safety-critical job function. | Target: 25 lbs | Yes |
| Static Lift Low | | 5 min | 16.3 weight | Essential for patient care activities including lifting, transferring, and mobility assistance. Required for healthcare worker position. | Target: 25 lbs | Yes |
| **ROM Total Spine/Extremity** | | | | | | |
| Cervical Spine Flexion Extension | | 5 min | F=16.00 E=21.83 | Construction work requiring consistent bilateral strength for tool operation and material manipulation. Safety-critical job function. | Within Normal Limits | Yes |
| Lumbar Spine Flexion Extension | | 5 min | F=16.83 E=22.17 | Job demands repetitive flexion and extension movements for data entry and computer work. Necessary for 6+ hours daily office tasks. | Within Normal Limits | No |
| Cervical Spine Lateral Flexion | | 5 min | L=18.83 R=20.67 | Job demands repetitive flexion and extension movements for data entry and computer work. Necessary for 6+ hours daily office tasks. | Within Normal Limits | No |
| Cervical Spine Rotation | | 5 min | F=16.67 E=21.17 | Position requires sustained gripping strength for operating hand tools and equipment. Critical for manufacturing assembly line work. | Within Normal Limits | Yes |
| Lumbar Spine Lateral Flexion | | 5 min | L=17.67 R=21.83 | Requires frequent lifting of 25-50 lbs materials throughout 8-hour shift. Essential for warehouse operations and material handling tasks. | Within Normal Limits | Yes |
| 4th Toe Mp Dorsi Plantar Flexion | 5 min | | F=18.67 E=22.33 | Job demands repetitive flexion and extension movements for data entry and computer work. Necessary for 6+ hours daily office tasks. | Within Normal Limits | No |
| **Occupational Tasks** | | | | | | |

| Activity Tested | Sit Time | Stand Time | Test Results | Job Description | Job Requirements | Job Match (Yes/No) |
|---|---|---|---|---|---|---|
| Fingering | 5 min | | %IS=21.1 | Construction work requiring consistent bilateral strength for tool operation and material manipulation. Safety-critical job function. | Within Normal Limits | Yes |
| Handling | 5 min | | %IS=20.5 | Essential for patient care activities including lifting, transferring, and mobility assistance. Required for healthcare worker position. | Within Normal Limits | Yes |
| **Cardio** | | | | | | |
| Bruce Treadmill Test | 5 min | | L=18.7<br>R=21.0 | Essential for patient care activities including lifting, transferring, and mobility assistance. Required for healthcare worker position. | Within Normal Limits | Yes |
| **Total Sit / Stand Time** | **95 min** | **40 min** | | | | |

**Legend:** L=Left, R=Right, F=Flexion, E=Extension, %IS=% Industrial Standard, HR=Heart Rate

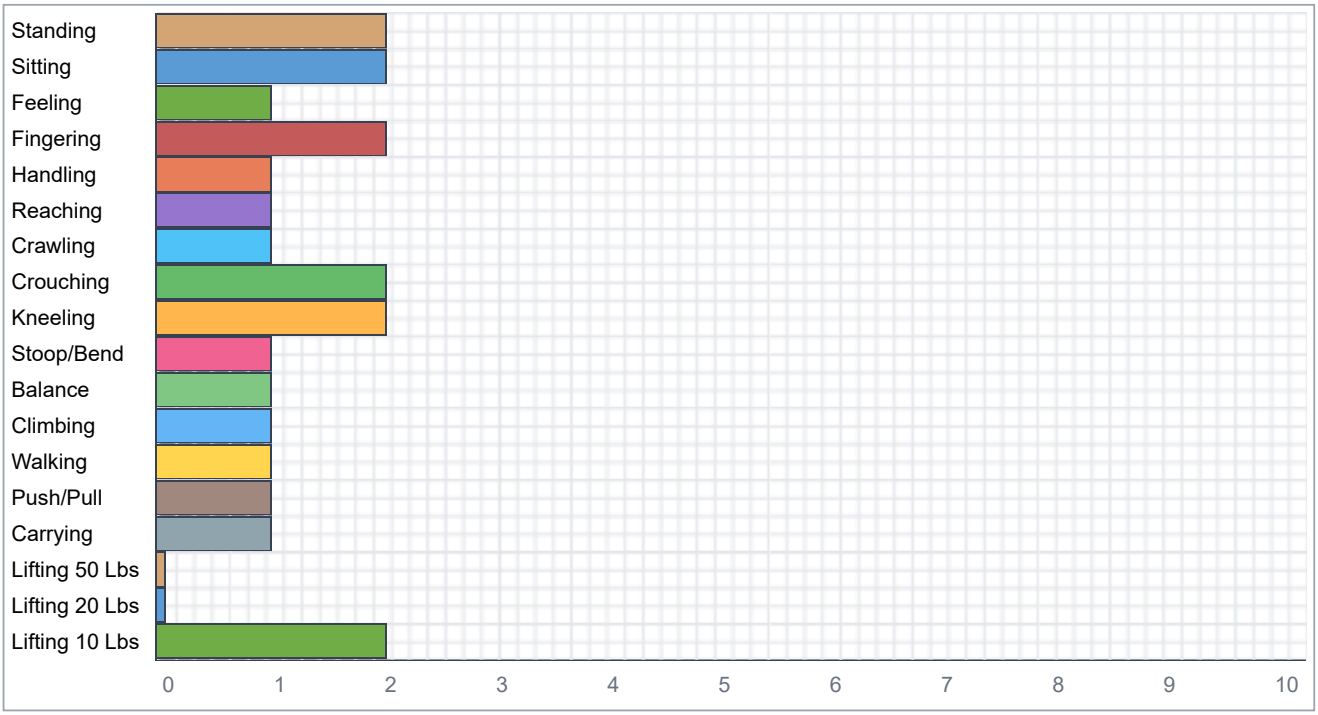
### Consistency Overview:

| Observed Effort During Testing | Total Noted for all Tested Activities |
|---|---|
| Poor effort | 3 out of 17 Tests |
| Fair to Average effort | 7 out of 17 Tests |
| Good effort | 7 out of 17 Tests |

| Consistent crosschecks | Description | Pass | Fail |
|---|---|---|---|
| Hand grip rapid exchange | Rapid Exchange Grip was 15% less to equal that of the Std position 2 Hand Grip measure. | | ✓ |
| Hand grip MVE | Position 1 through 5 displayed a bell curve showing greatest strength in position 2-3. | | ✓ |
| Pinch grip key/tip/palmar ratio | Key grip was greater than palmar which was greater than tip grip. | | ✓ |
| Dynamic lift HR fluctuation | Client displayed an increase in heart rate when weight and/or repetitions were increased (any dynamic lift: low, mid, high, overhead, or frequent). | ✓ | |
| ROM consistency check | During total spine ROM, the client provided three consecutive trials between 5 degrees and 10% of each other in a six-trial session. | | ✓ |
| Test/retest trial consistency | When tests were repeated the client displayed similar values and left/right deficiency. | | ✓ |
| Dominant side monitoring | It is expected that if the client is Right-Handed, he/she will demonstrate approx.10% greater values on the dominant side – if Left-Handed then the values would be close to the same. | | ✓ |
| Distraction test consistency | When performing distraction tests for sustained posture the client should demonstrate similar limitations and or abilities. | | ✓ |
| Consistency with diagnosis | Based on the diagnosis and complaints of the individual it is expected that those issues would relate to a similar function performance pattern during testing. | | ✓ |
| Coefficient of Variation (CV) | We would expect to see a CV less than 15% for a client that is deemed to be consistent. | | ✓ |

### Client Perceived Activity Rating Chart

*The Activity Rating Chart is a measure of the client's perceived ability level at the time of testing and is a representation of their subjective responses.*

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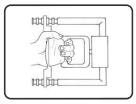
## Hand Strength Standard

Sample Illustration:



Standard Grip

The client was tested in our facility using standardized assessment protocols. The test results were compared to normative data when available.

### Results:

| Demonstrated Activity | Avg. Force (lb) | Norm (lb) | % age Norm | % age CV | Difference | Test Date |
|---|---|---|---|---|---|---|
| | Left \| Right | L \| R | L \| R | L \| R | Prev \| Total | |
| Hand Strength Standard | 16.0 \| 20.7 | 85.0 \| 90.0 | 19% \| 23% | 18% \| 15% | 23.0% | 10/20/2025 10:05:38 AM |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 14 | 14 | 14 | 22 | 16 | 16 | **16.0 weight** |
| **Right** | 16 | 23 | 19 | 20 | 20 | 26 | **20.7 weight** |



**Bilateral Difference:** 4.7 weight | **CV:** L=18% R=15% | **Bilateral Deficiency:** 23.0%

*Rating of Perceived Effort = Light

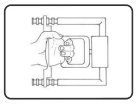
**Heart Rate:** Pre: 71 bpm Post: 76 bpm

***Comments:*** *Hand Strength Standard performed with poor effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials.*

**References:**
Grip and Pinch Strength: Normative Data for Adults, V. Mathiowetz et al., Arch Pys Med Rehab, Vol. 66, pp. 69 (Feb 1985).
The Seriously Uninjured Hand-Weakness of Grip, H. Stokes, Journal of Occupational Medicine, pp. 683-684 (Sep 1983).
Grip Strength in a Disabled Sample: Reliability and Normative Standards, L. Matheson, et al., Industrial Rehabilitation Quarterly, Vol. 1, no. 3, Fall 1988.
Detection of Submaximal effort by use of the rapid exchange grip, Hildreth et al., Journal of Hand Surgery, pp. 742 (Jul 1989).

## Hand Strength Rapid Exchange

Sample Illustration:



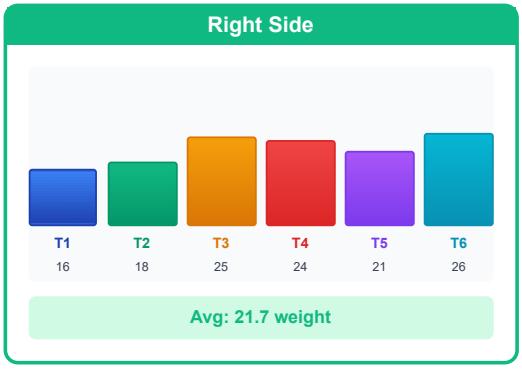
Rapid Exchange Grip

The client was tested in our facility using standardized assessment protocols. The test results were compared to normative data when available.

### Results:

| Demonstrated Activity | Avg. Force (lb) | Norm (lb) | % age Norm | % age CV | Difference | Test Date |
|---|---|---|---|---|---|---|
| | Left \| Right | L \| R | L \| R | L \| R | Prev \| Total | |
| Hand Strength Rapid Exchange | 17.5 \| 21.7 | 85.0 \| 90.0 | 21% \| 24% | 12% \| 17% | 19.0% | 10/20/2025 10:05:38 AM |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 18 | 18 | 14 | 18 | 21 | 16 | **17.5 weight** |
| **Right** | 16 | 18 | 25 | 24 | 21 | 26 | **21.7 weight** |


**Bilateral Difference:** 4.2 weight | **CV:** L=12% R=17% | **Bilateral Deficiency:** 19.0%

*Rating of Perceived Effort = Light

**Heart Rate:** Pre: 71 bpm Post: 75 bpm

***Comments:*** *Hand Strength Rapid Exchange performed with poor effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials.*

**References:**
Grip and Pinch Strength: Normative Data for Adults, V. Mathiowetz et al., Arch Pys Med Rehab, Vol. 66, pp. 69 (Feb 1985).
The Seriously Uninjured Hand-Weakness of Grip, H. Stokes, Journal of Occupational Medicine, pp. 683-684 (Sep 1983).
Grip Strength in a Disabled Sample: Reliability and Normative Standards, L. Matheson, et al., Industrial Rehabilitation Quarterly, Vol. 1, no. 3, Fall 1988.
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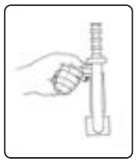
## Pinch Strength Key

Sample Illustration:



Key Pinch

The client was tested in our facility using a hand grip evaluation device. The test results were compared to normative data when available. It is expected that the dominant hand will display 10% greater values than the non-dominant hand with the exception of left handed individuals where the hand strength is equal. Strength measurements are in pounds (lbs).

### Results:

| Demonstrated Activity | Avg. Force (lb) | Norm (lb) | % age Norm | % age CV | Difference | Test Date |
|---|---|---|---|---|---|---|
| | Left \| Right | L \| R | L \| R | L \| R | Prev \| Total | |
| Pinch Strength Key | 18.3 \| 21.7 | 110.5 \| 120.8 | 17% \| 18% | 12% \| 13% | 15.0% | 10/20/2025 10:05:38 AM |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 18 | 20 | 21 | 18 | 14 | 19 | **18.3 weight** |
| **Right** | 23 | 22 | 18 | 24 | 18 | 25 | **21.7 weight** |



**Bilateral Difference:** 3.3 weight | **CV:** L=12% R=13% | **Bilateral Deficiency:** 15.0%

*Rating of Perceived Effort = Somewhat hard

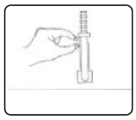
**Heart Rate:** Pre: 72 bpm Post: 75 bpm

***Comments:*** *Pinch Strength Key performed with fair to average effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials.*

**References:**
Grip and Pinch Strength: Normative Data for Adults, V. Mathiowetz et al., Arch Pys Med Rehab, Vol. 66, pp. 69 (Feb 1985).
The Seriously Uninjured Hand-Weakness of Grip, H. Stokes, Journal of Occupational Medicine, pp. 683-684 (Sep 1983).
Grip Strength in a Disabled Sample: Reliability and Normative Standards, L. Matheson, et al., Industrial Rehabilitation Quarterly, Vol. 1, no. 3, Fall 1988.
Detection of Submaximal effort by use of the rapid exchange grip, Hildreth et al., Journal of Hand Surgery, pp. 742 (Jul 1989).

## Pinch Strength Tip

Sample Illustration:



Tip Pinch

The client was tested in our facility using a hand grip evaluation device. The test results were compared to normative data when available. It is expected that the dominant hand will display 10% greater values than the non-dominant hand with the exception of left handed individuals where the hand strength is equal. Strength measurements are in pounds (lbs).

### Results:

| Demonstrated Activity | Avg. Force (lb) | Norm (lb) | % age Norm | % age CV | Difference | Test Date |
|---|---|---|---|---|---|---|
| | Left \| Right | L \| R | L \| R | L \| R | Prev \| Total | |
| Pinch Strength Tip | 18.2 \| 21.8 | 110.5 \| 120.8 | 16% \| 18% | 2% \| 10% | 17.0% | 10/20/2025 10:05:38 AM |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 18 | 18 | 19 | 18 | 18 | 18 | **18.2 weight** |
| **Right** | 18 | 25 | 21 | 22 | 21 | 24 | **21.8 weight** |



**Bilateral Difference:** 3.7 weight | **CV:** L=2% R=10% | **Bilateral Deficiency:** 17.0%

*Rating of Perceived Effort = Somewhat hard

**Heart Rate:** Pre: 73 bpm Post: 75 bpm

***Comments:*** *Pinch Strength Tip performed with fair to average effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials.*

**References:**
Grip and Pinch Strength: Normative Data for Adults, V. Mathiowetz et al., Arch Pys Med Rehab, Vol. 66, pp. 69 (Feb 1985).
The Seriously Uninjured Hand-Weakness of Grip, H. Stokes, Journal of Occupational Medicine, pp. 683-684 (Sep 1983).
Grip Strength in a Disabled Sample: Reliability and Normative Standards, L. Matheson, et al., Industrial Rehabilitation Quarterly, Vol. 1, no. 3, Fall 1988.
Detection of Submaximal effort by use of the rapid exchange grip, Hildreth et al., Journal of Hand Surgery, pp. 742 (Jul 1989).

## Cervical Spine Flexion Extension

Sample Illustration:

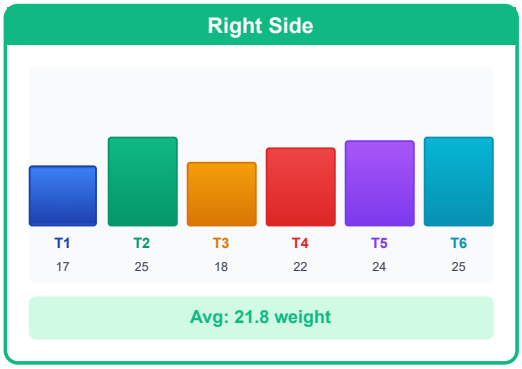
Cervical Flex/Ext

The client was tested in our facility using range of motion inclinometers. The test results were compared to normative data when available.

### Results:

| Area Evaluated: | Data: | Valid? | Norm: | % of Norm: | Test Date |
|---|---|---|---|---|---|
| Cervical Spine Flexion Extension | 22 deg | Pass | 60 deg | 36% | 10/20/2025 |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 12 | 19 | 15 | 16 | 18 | 16 | **16.0 weight** |
| **Right** | 17 | 25 | 18 | 22 | 24 | 25 | **21.8 weight** |


**Bilateral Difference:** 5.8 weight | **CV:** L=14% R=15% | **Bilateral Deficiency:** 27.0%

*Rating of Perceived Effort = Light

**Heart Rate:** Pre: 71 bpm Post: 75 bpm

***Comments:*** *Cervical Spine Flexion Extension performed with good effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials. Multiple clinical observations documented.*

**References:**
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 112-135, 4th ed..
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 81-102, 3rd ed..

## Lumbar Spine Flexion Extension

Sample Illustration:

Lumbar Flex/Ext

The client was tested in our facility using range of motion inclinometers. The test results were compared to normative data when available.

### Results:

| Area Evaluated: | Data: | Valid? | Norm: | % of Norm: | Test Date |
|---|---|---|---|---|---|
| Lumbar Spine Flexion Extension | 22 deg | Pass | 60 deg | 37% | 10/20/2025 |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 17 | 15 | 13 | 24 | 14 | 18 | **16.8 weight** |
| **Right** | 22 | 22 | 21 | 24 | 18 | 26 | **22.2 weight** |



**Bilateral Difference:** 5.3 weight | **CV:** L=22% R=11% | **Bilateral Deficiency:** 24.0%

*Rating of Perceived Effort = Hard (heavy)

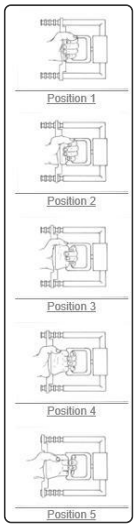
**Heart Rate:** Pre: 73 bpm Post: 75 bpm

***Comments:*** *Lumbar Spine Flexion Extension performed with good effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials. Multiple clinical observations documented.*

**References:**
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 112-135, 4th ed..
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 81-102, 3rd ed..

## Hand Strength Mmve

Sample Illustration:



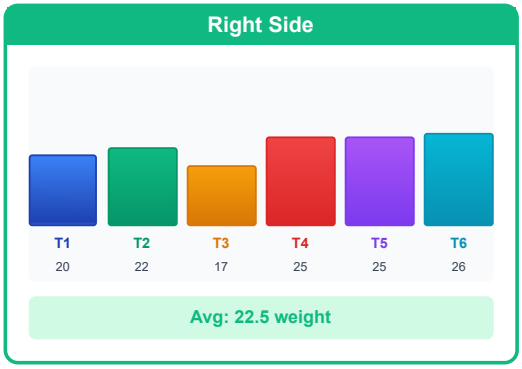
Hand Strength MMVE

The client was tested in our facility using standardized assessment protocols. The test results were compared to normative data when available.

### Results:

| Demonstrated Activity | Avg. Force (lb) | Norm (lb) | % age Norm | % age CV | Difference | Test Date |
|---|---|---|---|---|---|---|
| | Left \| Right | L \| R | L \| R | L \| R | Prev \| Total | |
| Hand Strength Mmve | 17.0 \| 22.5 | 85.0 \| 90.0 | 20% \| 25% | 21% \| 14% | 24.0% | 10/20/2025 10:05:38 AM |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 19 | 15 | 14 | 24 | 14 | 16 | **17.0 weight** |
| **Right** | 20 | 22 | 17 | 25 | 25 | 26 | **22.5 weight** |


**Bilateral Difference:** 5.5 weight | **CV:** L=21% R=14% | **Bilateral Deficiency:** 24.0%

*Rating of Perceived Effort = Somewhat hard

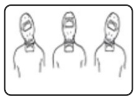
**Heart Rate:** Pre: 73 bpm Post: 76 bpm

***Comments:*** *Hand Strength Mmve performed with fair to average effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials.*

**References:**
Grip and Pinch Strength: Normative Data for Adults, V. Mathiowetz et al., Arch Pys Med Rehab, Vol. 66, pp. 69 (Feb 1985).
The Seriously Uninjured Hand-Weakness of Grip, H. Stokes, Journal of Occupational Medicine, pp. 683-684 (Sep 1983).
Grip Strength in a Disabled Sample: Reliability and Normative Standards, L. Matheson, et al., Industrial Rehabilitation Quarterly, Vol. 1, no. 3, Fall 1988.
Detection of Submaximal effort by use of the rapid exchange grip, Hildreth et al., Journal of Hand Surgery, pp. 742 (Jul 1989).

## Cervical Spine Lateral Flexion

Sample Illustration:



Cervical Lateral Flexion

The client was tested in our facility using range of motion inclinometers. The test results were compared to normative data when available.

### Results:

| Area Evaluated: | Data: | Valid? | Norm: | % of Norm: | Test Date |
|---|---|---|---|---|---|
| Cervical Spine Lateral Flexion | 21 deg | Pass | 60 deg | 34% | 10/20/2025 |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 18 | 20 | 20 | 20 | 15 | 20 | **18.8 weight** |
| **Right** | 16 | 22 | 22 | 23 | 22 | 19 | **20.7 weight** |



**Bilateral Difference:** 1.8 weight | **CV:** L=10% R=12% | **Bilateral Deficiency:** 9.0%

*Rating of Perceived Effort = Hard (heavy)

**Heart Rate:** Pre: 73 bpm Post: 75 bpm

***Comments:*** *Cervical Spine Lateral Flexion performed with good effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials. Multiple clinical observations documented.*

**References:**
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 112-135, 4th ed..
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 81-102, 3rd ed..

## Pinch Strength Palmar

Sample Illustration:

Palmar Pinch

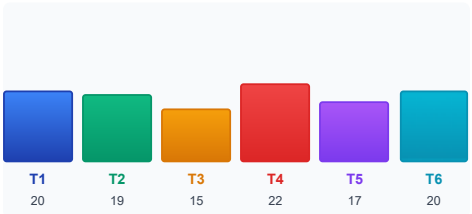
The client was tested in our facility using a hand grip evaluation device. The test results were compared to normative data when available. It is expected that the dominant hand will display 10% greater values than the non-dominant hand with the exception of left handed individuals where the hand strength is equal. Strength measurements are in pounds (lbs).

### Results:

| Demonstrated Activity | Avg. Force (lb) | Norm (lb) | % age Norm | % age CV | Difference | Test Date |
|---|---|---|---|---|---|---|
| | Left \| Right | L \| R | L \| R | L \| R | Prev \| Total | |
| Pinch Strength Palmar | 18.8 \| 22.0 | 110.5 \| 120.8 | 17% \| 18% | 12% \| 20% | 14.0% | 10/20/2025 10:05:38 AM |

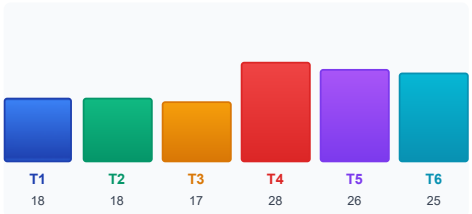
| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 20 | 19 | 15 | 22 | 17 | 20 | **18.8 weight** |
| **Right** | 18 | 18 | 17 | 28 | 26 | 25 | **22.0 weight** |

**Left Side**




Avg: 18.8 weight

**Right Side**




Avg: 22.0 weight

**Bilateral Difference:** 3.2 weight | **CV:** L=12% R=20% | **Bilateral Deficiency:** 14.0%

*Rating of Perceived Effort = Light

**Heart Rate:** Pre: 73 bpm Post: 75 bpm

***Comments:*** *Pinch Strength Palmar performed with good effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials. Multiple clinical observations documented.*

**References:**
Grip and Pinch Strength: Normative Data for Adults, V. Mathiowetz et al., Arch Pys Med Rehab, Vol. 66, pp. 69 (Feb 1985).
The Seriously Uninjured Hand-Weakness of Grip, H. Stokes, Journal of Occupational Medicine, pp. 683-684 (Sep 1983).
Grip Strength in a Disabled Sample: Reliability and Normative Standards, L. Matheson, et al., Industrial Rehabilitation Quarterly, Vol. 1, no. 3, Fall 1988.
Detection of Submaximal effort by use of the rapid exchange grip, Hildreth et al., Journal of Hand Surgery, pp. 742 (Jul 1989).

## Dynamic Frequent Lift Mid

Sample Illustration:

Dynamic Lift Mid

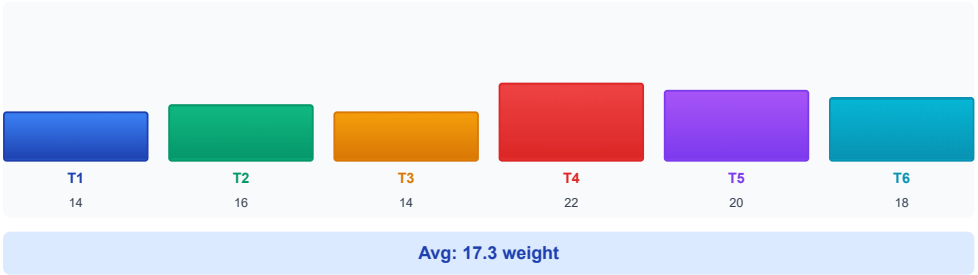
The client was tested in our facility using a dynamic lift evaluation apparatus. The test results were compared to normative data when available.

### Results:

| Demonstrated Activity | Avg. Weight (weight) | CV% | Test Date |
|---|---|---|---|
| Dynamic Frequent Lift Mid | 17.3 | 17% | 10/20/2025 |

| Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|
| 14 | 16 | 14 | 22 | 20 | 18 | **17.3 weight** |

>




*Rating of Perceived Effort = Light

**Heart Rate:** Pre: 73 bpm Post: 76 bpm

**Endpoint condition (for full description refer to references):** Psychophysical

***Comments:*** *Dynamic Frequent Lift Mid performed with good effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials. Multiple clinical observations documented.*

**References:**
Progressive Iso-inertial Lifting Evaluation: A Standardized Protocol and Normative Database, Mayer et al., Spine, Volume 13 Num. 9, pp. 993.

## Static Lift Low

Sample Illustration:

Static Lift Low

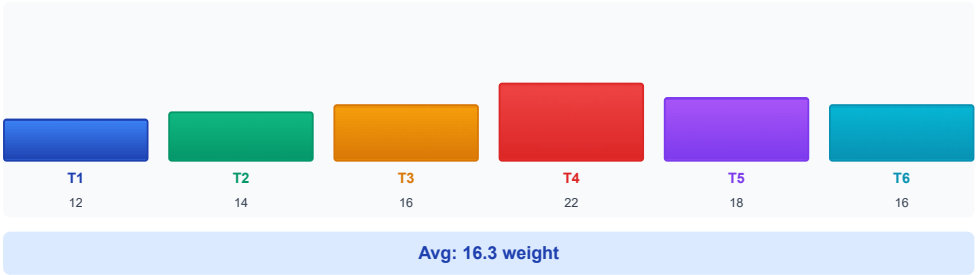
The client was tested in our facility using a dynamic lift evaluation apparatus. The test results were compared to normative data when available.

### Results:

| Demonstrated Activity | Avg. Weight (weight) | CV% | Test Date |
|---|---|---|---|
| Static Lift Low | 16.3 | 19% | 10/20/2025 |

| Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|
| 12 | 14 | 16 | 22 | 18 | 16 | **16.3 weight** |

>




*Rating of Perceived Effort = Very hard

**Heart Rate:** Pre: 72 bpm Post: 76 bpm

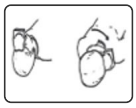
***Comments:*** *Static Lift Low could not be fully demonstrated due to pain/discomfort. Client attempted but unable to complete all trials at maximum effort. Limited by symptoms.*

**References:**

Isometric Strength Testing in Selecting Workers for Strenuous Jobs, William M. Keyserling, University of Michigan (1979).
Pre-employment Strength Testing: An Updated Position, Don B. Chaffin, PhD., Journal of Occupational Medicine, Vol. 20 No. 6, June 1978.
Work Practices Guide to Manual Lifting, Donald Badges PhD. (1981), NIOSH.
Ergonomics Guide for the Assessment of Human Static Strength, Don Chaffin, PhD., American Industrial Hygiene Association Journal, July 1975.
Static Ergonomic Strength Testing in Evaluating Occupational Back Pain, Harber & SooHoo, Journal of Occupational Medicine, Vol. 26 No. 12, Dec 1984.

## Cervical Spine Rotation

Sample Illustration:



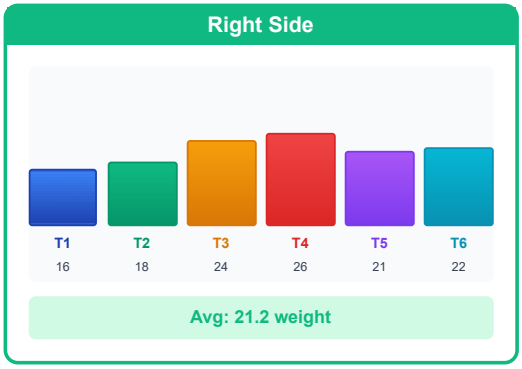
Cervical Rotation

The client was tested in our facility using standardized assessment protocols. The test results were compared to normative data when available.

### Results:

| Demonstrated Activity | Avg. Force (lb) | Norm (lb) | % age Norm | % age CV | Difference | Test Date |
|---|---|---|---|---|---|---|
| | Left \| Right | L \| R | L \| R | L \| R | Prev \| Total | |
| Cervical Spine Rotation | 16.7 \| 21.2 | 85.0 \| 90.0 | 20% \| 24% | 11% \| 16% | 21.0% | 10/20/2025 10:05:38 AM |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 15 | 19 | 16 | 18 | 14 | 18 | **16.7 weight** |
| **Right** | 16 | 18 | 24 | 26 | 21 | 22 | **21.2 weight** |


**Bilateral Difference:** 4.5 weight | **CV:** L=11% R=16% | **Bilateral Deficiency:** 21.0%

*Rating of Perceived Effort = Somewhat hard

**Heart Rate:** Pre: 72 bpm Post: 76 bpm

***Comments:*** *Cervical Spine Rotation performed with fair to average effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials.*

**References:**
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 112-135, 4th ed..
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 81-102, 3rd ed..

## Lumbar Spine Lateral Flexion

Sample Illustration:

Lumbar Lateral Flexion

The client was tested in our facility using range of motion inclinometers. The test results were compared to normative data when available.

### Results:

| Area Evaluated: | Data: | Valid? | Norm: | % of Norm: | Test Date |
|---|---|---|---|---|---|
| Lumbar Spine Lateral Flexion | 22 deg | Pass | 60 deg | 36% | 10/20/2025 |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 19 | 18 | 14 | 19 | 21 | 15 | **17.7 weight** |
| **Right** | 24 | 20 | 17 | 22 | 22 | 26 | **21.8 weight** |



**Bilateral Difference:** 4.2 weight | **CV:** L=14% R=13% | **Bilateral Deficiency:** 19.0%

*Rating of Perceived Effort = Light

**Heart Rate:** Pre: 72 bpm Post: 76 bpm

***Comments:*** *Lumbar Spine Lateral Flexion performed with poor effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials. Multiple clinical observations documented.*

**References:**
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 112-135, 4th ed..
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 81-102, 3rd ed..

## 4th Toe Mp Dorsi Plantar Flexion

Sample Illustration:

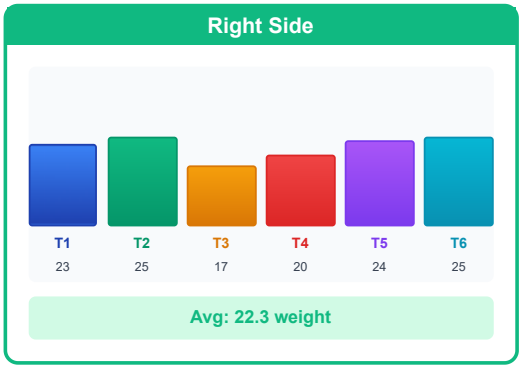
4th Toe MP Dorsi/Plantar

The client was tested in our facility using range of motion inclinometers. The test results were compared to normative data when available.

### Results:

| Area Evaluated: | Data: | Valid? | Norm: | % of Norm: | Test Date |
|---|---|---|---|---|---|
| 4th Toe Mp Dorsi Plantar Flexion | 22 deg | Pass | 60 deg | 37% | 10/20/2025 |

| Side | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Average (weight) |
|---|---|---|---|---|---|---|---|
| **Left** | 16 | 16 | 21 | 24 | 14 | 21 | **18.7 weight** |
| **Right** | 23 | 25 | 17 | 20 | 24 | 25 | **22.3 weight** |


**Bilateral Difference:** 3.7 weight | **CV:** L=19% R=13% | **Bilateral Deficiency:** 16.0%

*Rating of Perceived Effort = Hard (heavy)

**Heart Rate:** Pre: 73 bpm Post: 76 bpm

***Comments:*** *4th Toe Mp Dorsi Plantar Flexion performed with good effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials. Multiple clinical observations documented.*

**References:**
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 90-92, 4th ed..
Guides to the Evaluation of Permanent Impairment, American Medical Association, pp. 20-38, 101, 3rd ed..

## Bruce Treadmill Test

Sample Illustration:

Bruce Treadmill

The Bruce Treadmill Test (Bruce Protocol) is commonly used to help identify a person's level of aerobic endurance by providing an all-out maximal oxygen uptake or $VO_2$ max, which measures the capacity to perform sustained exercise and is linked to aerobic endurance.

### Results:

### Protocol Stages

The Bruce protocol involves getting on a treadmill and increasing speed and incline every three minutes (in stages). The test stops when you've hit 85% of your maximum heart rate, your heart rate exceeds 115 beats per minute for two stages, or it is deemed that the test should no longer continue. If your heart rate changes more than six beats per minute between the second and third minute of any given stage, you are kept at the same speed & incline for an additional minute. (As your HR has not achieved a steady state).

### Measuring VO2 Max:

Maximal oxygen uptake (VO2 max) refers to the maximum amount of oxygen an individual can use during intense or maximal exercise. It is measured as milliliters of oxygen used in one minute per kilogram of body weight (ml/kg/min).

The Bruce treadmill test is an indirect maximal oxygen uptake test. It is indirect because it estimates VO2 max using a formula and the person's performance on a treadmill as the workload increases.

When the Bruce protocol formula is used, T stands for total time on the treadmill and is measured as a fraction of a minute. If test time of 10 minutes 15 seconds would be written as T=10.25); this formula changes based on gender. The time you spend on the treadmill is your test score and can be used to estimate your VO2 max value. Blood pressure and ratings of perceived exertion are also often collected during the Bruce protocol test.

**Men:** $14.8 - (1.379 \times T) + (0.451 \times T^2) - (0.012 \times T^3) = VO2\ max$
**Women:** $4.38 \times T - 3.9 = VO2\ max$

### Bruce Treadmill Test Stages, Speeds, and Inclines:

| Stage | Treadmill Speed | Treadmill Incline |
|---|---|---|
| 1 | 1.7 mph | 10% grade |
| 2 | 2.5 mph | 12% grade |
| 3 | 3.4 mph | 14% grade |
| 4 | 4.2 mph | 16% grade |
| 5 | 5.0 mph | 18% grade |
| 6 | 5.5 mph | 20% grade |
| 7 | 6.0 mph | 22% grade |

**CLASSIFICATION:** Good **VO2 MAX:** 35 ml/kg/min

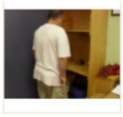
**VO2 Max Norms for Men as Measured in ml/kg/min**

| Age | Excellent | Good | Above Average | Average | Below Average | Poor | Very Poor |
|---|---|---|---|---|---|---|---|
| 20-29 | >56 | 50-56 | 46-49 | 42-45 | 37-41 | 31-36 | <31 |
| 30-39 | >54 | 48-54 | 44-47 | 40-43 | 35-39 | 29-34 | <29 |
| 40-49 | >52 | 46-52 | 42-45 | 38-41 | 33-37 | 27-32 | <27 |
| 50-59 | >50 | 44-50 | 40-43 | 36-39 | 31-35 | 25-30 | <25 |
| 60+ | >48 | 42-48 | 38-41 | 34-37 | 29-33 | 23-28 | <23 |

**VO2 Max Norms for Women as Measured in ml/kg/min**

| Age | Excellent | Good | Above Average | Average | Below Average | Poor | Very Poor |
|---|---|---|---|---|---|---|---|
| 20-29 | >49 | 43-49 | 39-42 | 35-38 | 31-34 | 25-30 | <25 |
| 30-39 | >47 | 41-47 | 37-40 | 33-36 | 29-32 | 23-28 | <23 |
| 40-49 | >45 | 39-45 | 35-38 | 31-34 | 27-30 | 21-26 | <21 |
| 50-59 | >43 | 37-43 | 33-36 | 29-32 | 25-28 | 19-24 | <19 |
| 60+ | >41 | 35-41 | 31-34 | 27-30 | 23-26 | 17-22 | <17 |

**CLIENT IMAGES:**



Screenshot 2025-10-15 182511.png

*Rating of Perceived Effort = Very hard

**Heart Rate:** Pre: 72 bpm Post: 76 bpm

***Comments:*** *Cardio test completed: Bruce Treadmill Test. Specialized cardio data collected.*

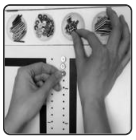
**References:**

· Bires AM, Lawson D, Wasser TE, Raber-Baer D. Comparison of Bruce treadmill exercise test protocols: is ramped Bruce equal or superior to standard bruce in producing clinically valid studies for patients presenting for evaluation of cardiac ischemia or arrhythmia with body mass index equal to or greater than 30? J Nucl Med Technol. 2013 Dec;41(4):274-8

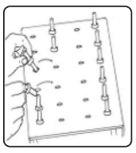
· Poehling CP, Llewellyn TL. The Effects of Submaximal and Maximal Exercise on Heart Rate Variability. Int J Exerc Sci. 2019;12(2):9-14.

## Occupational Tasks Methods Time Measurement Analysis

Sample Illustration:



Fingering



Handling

*The client was tested in our facility using MTM. The test results were compared to industrial standards.*

| Fingering - 20/10/2025 12:59:53 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Trial:** | **Side:** | **Weight/Plane:** | **Distance/Posture:** | **Reps:** | **Time (sec)** | **%IS** | **Time Set Completed** |
| 1 | Both | Immediate | Standing | 10 | 13.8 | 114.6 | |
| 2 | Both | Immediate | Standing | 10 | 6.3 | 168.6 | |
| 3 | Both | Immediate | Standing | 10 | 13.7 | 115.4 | |
| **Avg.** | | | | 10 | 11.27 | 132.87 | 33.8 |
| **Total IS%** | | | | | | **132.9%** | |

**Heart Rate:** Pre: 73 bpm Post: 75 bpm

***Comments:*** *Fingering performed with good effort. Client demonstrated good understanding of test requirements and maintained consistent performance throughout all trials. Multiple clinical observations documented.*

| Handling - 20/10/2025 12:58:33 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Trial:** | **Side:** | **Weight/Plane:** | **Distance/Posture:** | **Reps:** | **Time (sec)** | **%IS** | **Time Set Completed** |
| 1 | Both | Immediate | Standing | 10 | 6.8 | 199.2 | |
| 2 | Both | Immediate | Standing | 10 | 15.0 | 109.0 | |
| 3 | Both | Immediate | Standing | 10 | 17.9 | 91.1 | |
| **Avg.** | | | | 10 | 13.23 | 133.10 | 39.7 |
| **Total IS%** | | | | | | **133.1%** | |

**Heart Rate:** Pre: 72 bpm Post: 76 bpm

***Comments:*** *Handling could not be fully demonstrated due to pain/discomfort. Client attempted but unable to complete all trials at maximum effort. Limited by symptoms.*

**References:**

Anderson, D.S. and Edstrom D.P. "MTM Personnel Selection Tests; Validation at a Northwestern National Life Insurance Company". Journal of Methods-Time Measurement, 15, (3).

Birdsong, J.H. and Chyatte, S.B. (1970) "Further medical applications of methods-time measurement". Journal of Methods-Time Measurement, 15, 19-27.

Brickey, "MTM in a Sheltered Workshop". Journal of Methods-Time Measurement, 8, (3) 2-7.

Chyatte, S.B. and Birdsong, J.H. (1972) "Methods time measurement in assessment of motor performance". Archives of Physical Medicine and Rehabilitation, 53, 38-44.

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## Appendix One: Reference Charts

### Perceived Exertion and Pain Scales

| Perceived Exertion | Rating (RPE) | Minimal Heart Rate | Mean Heart Rate | Maximal Heart Rate |
|---|---|---|---|---|
| no exertion at all | 6 | 69 | 77 | 91 |
| extremely light | 7 | 76 | 85 | 101 |
| | 8 | 83 | 93 | 111 |
| very light | 9 | 89 | 101 | 122 |
| | 10 | 96 | 110 | 132 |
| light | 11 | 103 | 118 | 142 |
| | 12 | 110 | 126 | 153 |
| somewhat hard | 13 | 116 | 135 | 163 |
| | 14 | 123 | 143 | 173 |
| hard (heavy) | 15 | 130 | 151 | 184 |
| | 16 | 137 | 159 | 194 |
| very hard | 17 | 143 | 168 | 204 |
| | 18 | 150 | 176 | 215 |
| extremely hard | 19 | 157 | 184 | 225 |
| maximal exertion | 20 | 164 | 193 | 235 |

**Borg G. Borg's Perceived Exertion and Pain Scales. Human Kinetics. 1998.*

### Physical Demand Characteristics of Work

| Physical Demand Characteristics of Work | | | |
|---|---|---|---|
| (Dictionary of Occupational Titles - Volume II, Fourth Edition, Revised 1991) | | | |
| **Physical Demand Level** | **OCCASIONAL**<br>**0-33% of the workday** | **FREQUENT**<br>**34-66% of the workday** | **CONSTANT**<br>**67-100% of the workday** |
| **Sedentary** | 1 - 10 lbs. | Negligible | Negligible |
| **Light** | 11 - 20 lbs. | 1 - 10 lbs. | Negligible |
| **Medium** | 21 - 50 lbs. | 11 - 25 lbs. | 1 - 10 lbs. |
| **Heavy** | 51 - 100 lbs. | 26 - 50 lbs. | 11 - 20 lbs. |
| **Very Heavy** | Over 100 lbs. | Over 50 lbs. | Over 20 lbs. |

## PDC Categories based on Sustainable Energy Level

| PDC Categories based on Sustainable Energy Level (Energy Cost) over an 8-hour workday | |
|---|---|
| **PDC Category** | **Sustainable Energy Level** |
| **Sedentary** | < 1.7 Kcal/min |
| **Light** | 1.7 to 3.2 Kcal/min |
| **Medium** | 3.3 to 5.7 Kcal/min |
| **Heavy** | 5.8 to 8.2 Kcal/min |
| **Very Heavy** | 8.3 or more Kcal/min |

## General Patterns of Activity Descriptors

**(S) Sedentary Work**

Exerting up to 10 lbs of force occasionally and/or a negligible amount of force frequently to lift, carry, push, pull, or otherwise move objects, including the human body. Sedentary work involves sitting most of the time but may involve walking or standing for brief periods of time. Jobs are sedentary if walking and standing are required occasionally and all other sedentary criteria are met.

**(L) Light Work**

Exerting up to 20 lb of force occasionally, and/or up to 10 lb of force frequently, and/or a negligible amount of force constantly to move objects. Physical demand requirements are in excess of those for sedentary work. Even though the weight lifted may be only negligible, a job should be rated "Light Work: (1) when it requires walking or standing to a significant degree; or (2) when it requires sitting most of the time but entails pushing and/or pulling of arm or leg controls; and/or (3) when the job requires working at a production rate pace entailing the constant pushing and/or pulling of materials even though the weight of those materials is negligible. The constant stress and strain of maintaining a production rate pace, especially in an industrial setting, can be and is physically exhausting.

**(M) Medium Work**

Exerting 20 to 50 lbs of force occasionally, and/or 10 to 25 lbs of force frequently, and/or greater than negligible up to 10 lbs of force constantly to move objects. Physical demand requirements are in excess of those for light work.

**(H) Heavy Work**

Exerting 50 to 100 lbs of force occasionally, and/or 25 to 50 lbs of force frequently, and/or 10 to 20 lbs of force constantly to move objects. Physical demand requirements are in excess of those for medium work.

**"Occasionally" indicates that an activity or condition exists up to one third of the time; "frequently" indicates that an activity or condition exists from one third to two thirds of the time; "constantly' indicates that an activity or condition exists two thirds or more of the time.*

## Dynamic Lift Test End Point Conditions

| Test End Point Conditions | |
|---|---|
| **CONDITION** | **DESCRIPTION** |
| **Biomechanical** | The biomechanical stopping point follows the biomechanics of the person as they perform the activity. While you will not be able to teach proper body mechanics during the relatively short duration of an FCE, you should encourage proper body mechanics. Ultimately, you will be assessing the client's capacity as he or she moves in their usual way to complete each task. The biomechanical stopping point relies on your clinical observation skills and knowledge of proper body mechanics. |
| **Physiological** | Physiological response to testing refers to the client's involuntary reactions to the tests. These reactions include heart rate, blood pressure, respiration rate, changes in pallor, and similar markers. The American College of Sports Medicine recommends keeping the client's heart rate below 85% of age-predicted maximum heart rate (APMHR) during physically demanding testing, with a recovery to 70% APMHR before commencing the next test. |
| **Psychophysical** | The psychophysical ending point is based on the client's perceived rate of exertion—that is, how the client feels or perceives the difficulty of the task. You can use a scale to rate the perception of difficulty, such as the Borg Scale, or simply ask the client to describe their comfort level with the activity. The test should be terminated at the point where the client feels they can no longer continue and has reached their maximum performance level. |
| **Task Requirement** | A fourth, but still important, stopping criterion is the task requirement. This applies more to return-to-work (RTW) testing when you know the specific physical demands of the job tasks and are assessing the client's ability to perform them. When the client's tested ability matches the defined job requirement, you should stop the test because continuing beyond the task requirement could put the client at unnecessary risk. |

## Appendix Two: Digital Library