

microFET[®]3 Muscle Test Dynamometer and Inclinometer

Perform Muscle Testing and Range Of Motion Evaluations With One Device

The wireless microFET3 combination dynamometer and inclinometer is a portable, affordable device, that provides accurate and objective muscle testing and range of motion measurements. Now you can perform two evaluations with one gauge when diagnosing and treating muscular disorders. The gauge allows the clinician one free hand to stabilize and assist the patient when performing range of motion tests.



Features

- Perform two evaluation functions using a single device
- Portable, cost effective option for users for muscle testing and range of motion
- Easy to read LCD displays show peak force and elapsed time for muscle testing, and degrees for range of motion testing
- Use as standalone device, or wireless with clinical or data collection software

Specifications

- Muscle test measurement range: 0-150 lbs force. Range of motion Mmeasurement: 0-180 degrees
- Muscle test selectable units of measure: pounds (lbs.), Newtons (N), or kilogram-force (kgf)
- Two threshold settings for muscle testing: Low Threshold – 0.8 lb. to 150 lbs. in 0.1 lb. increments and High Threshold – 3.0 lbs. to 150 lbs. in 0.1 lb. increments
- Accuracy within 1% of reading muscle testing, within 1° range of motion
- Stores up to 30 tests
- Uses rechargeable lithium ion battery
- Self-activating “sleep” mode after 3 minutes of non-use to extend battery life

Your Purchase Includes

- microFET3 muscle testing device
- 3 Test attachments - flat transducer pad, curved transducer pad, digit transducer pad
- User manual
- Calibration certificate
- Wall pack power supply
- Carrying case
- 1 year standard warranty included, with extended warranties available
- Optional clinical or FET data collection software available
- Available muscle and spinal range of motion test positions wall charts and test record forms to print can be downloaded from the website
- Product Warranty: Warranty registration completed online on website

Evaluation tools to measure, objectify and document human performance

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Range-of-Motion Testing Positions

Pictures indicate basic Range-of-Motion tests with inclinometer placement, proper positioning and stabilization of specific areas.

Cervical Testing Positions



Cervical Flexion (Occipital Starting Position) Place unit on top of head. [\(Click\)](#)



Cervical Flexion (Occipital Ending Position) Ask patient to tip their head and neck forward as far as possible without experiencing pain. [\(Click\)](#) Click a third time to get reading.



Cervical Flexion (T-1 Starting Position) With the patient still in the same position, place unit on T-1. [\(Click\)](#)



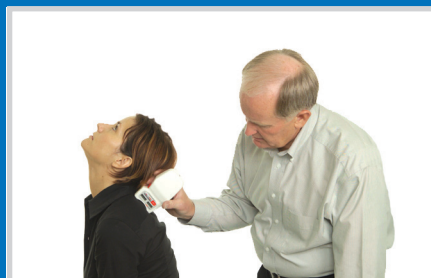
Cervical Flexion (T-1 Ending Position) Ask the patient to return to the neutral position. [\(Click\)](#) Click a third time to get reading.



Cervical Extension (Occipital Starting Position) Place unit on top of head. [\(Click\)](#)



Cervical Extension (Occipital Ending Position) Ask patient to tip their head and neck backwards as far as possible without experiencing pain. [\(Click\)](#) Click a third time to get reading.



Cervical Extension (T-1 Starting Position) With the patient still in the same position, place unit on T-1. [\(Click\)](#)



Cervical Extension (T-1 Ending Position) Ask the patient to return to the neutral position. [\(Click\)](#) Click a third time to get reading.



Cervical Lateral Flexion-Left (Occipital Starting Position) Place the unit on top of head. [\(Click\)](#)



Cervical Lateral Flexion-Left (Occipital Ending Position) Ask the patient to fully laterally flex their head to the left as far as possible without experiencing pain. [\(Click\)](#) Click a third time to get reading.



Cervical Lateral Flexion-Left (T-1 Starting Position) With the patient in the same position place the unit on T-1 with horseshoe facing up against T-1. [\(Click\)](#)



Cervical Lateral Flexion-Left (T-1 Ending Position) Ask the patient to return to the neutral position. [\(Click\)](#) Click a third time to get reading.



Cervical Lateral Flexion-Right (Occipital Starting Position) Place the unit on top of head. [\(Click\)](#)



Cervical Lateral Flexion-Right (Occipital Ending Position) Ask the patient to fully laterally flex their head to the right as far as possible without experiencing pain. [\(Click\)](#) Click a third time to get reading.



Cervical Lateral Flexion-Right (T-1 Starting Position) With the patient in the same position place the unit on T-1 with horseshoe facing up against T-1. [\(Click\)](#)



Cervical Lateral Flexion-Right (T-1 Ending Position) Ask the patient to return to the neutral position. [\(Click\)](#) Click a third time to get reading.



Cervical Rotation-Left (Starting Position) With the patient lying face up, place unit on forehead. [\(Click\)](#)



Cervical Rotation-Left (Ending Position) Ask the patient to fully rotate their head to the left as far as possible without experiencing pain. [\(Click\)](#) Click a third time to get reading.



Cervical Rotation-Right (Starting Position) With the patient lying face up, place unit on forehead. [\(Click\)](#)



Cervical Rotation-Right (Ending Position) Ask the patient to fully rotate their head to the right as far as possible without experiencing pain. [\(Click\)](#) Click a third time to get reading.

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Range-of-Motion Testing Positions

Pictures indicate basic Range-of-Motion tests with inclinometer placement, proper positioning and stabilization of specific areas.

Lumbar Testing Positions



Lumbar Flexion
(T-12 Starting Position)
Place the unit on T-12. (Click)



Lumbar Flexion (T-12 Ending Position) Ask the patient to fully flex (bend forward at the waist) as far as possible without experiencing pain. (Click) Click a third time to get reading.



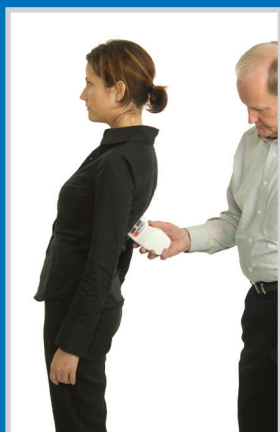
Lumbar Flexion
(S-1 Starting Position) With the patient still in the same position, place unit on S-1. (Click)



Lumbar Flexion (S-1 Ending Position) Ask the patient to return to the neutral position. (Click) Click a third time to get reading.



Lumbar Extension
(T-12 Starting Position)
Place the unit on T-12. (Click)



Lumbar Extension (T-12 Ending Position) Ask the patient to fully extend (bend backwards at the waist) as far as possible without experiencing pain. (Click) Click a third time to get reading.



Lumbar Extension
(S-1 Starting Position) With the patient still in the same position, place unit on S-1. (Click)



Lumbar Extension (S-1 Ending Position) Ask the patient to return to the neutral position. (Click) Click a third time to get reading.



Lumbar Lateral Flexion-Left
(T-12 Starting Position) Place the unit on T-12 flat against the patient with horseshoe facing upward. (Click)



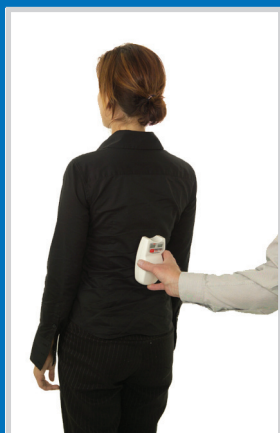
Lumbar Lateral Flexion-Left (T-12 Ending Position) Ask the patient to bend at the waist to the left as far as possible without experiencing pain. (Click) Click a third time to get reading.



Lumbar Lateral Flexion-Left
(S-1 Starting Position) With the patient still in the same position, place unit on S-1 flat against the patient. (Click)



Lumbar Lateral Flexion-Left (S-1 Ending Position) Ask the patient to return to the neutral position. (Click) Click a third time to get reading.



Lumbar Lateral Flexion-Right
(T-12 Starting Position) Place the unit on T-12 flat against the patient with horseshoe facing upward. (Click)



Lumbar Lateral Flexion-Right (T-12 Ending Position) Ask the patient to bend at the waist to the right as far as possible without experiencing pain. (Click) Click a third time to get reading.



Lumbar Lateral Flexion-Right
(S-1 Starting Position) With the patient still in the same position, place unit on S-1 flat against the patient. (Click)



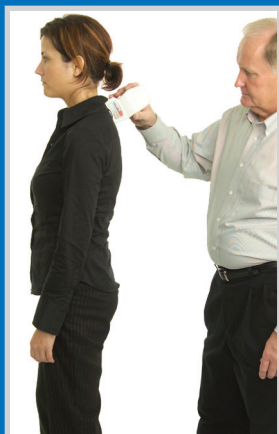
Lumbar Lateral Flexion-Right (S-1 Ending Position) Ask the patient to return to the neutral position. (Click) Click a third time to get reading.

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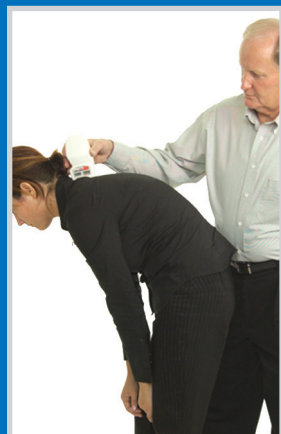
Range-of-Motion Testing Positions

Pictures indicate basic Range-of-Motion tests with inclinometer placement, proper positioning and stabilization of specific areas.

Thoracic Testing Positions



Thoracic Flexion
(T-1 Starting Position)
Place the unit on T-1. (Click)



Thoracic Flexion (T-1 Ending Position) Ask the patient to bend forward at the waist as far as possible without experiencing pain. (Click) Click a third time to get reading.



Thoracic Flexion
(T-12 Starting Position) With the patient still in the same position, place unit on T-12. (Click)



Thoracic Flexion (T-12 Ending Position) Ask the patient to return to the neutral position. (Click) Click a third time to get reading.



Thoracic Rotation-Left
(T-1 Starting Position) Ask patient to bend forward. Place the unit on T-1 (ear-to-ear). (Click)



Thoracic Rotation-Left (T-1 Ending Position) Ask the patient to rotate the trunk as far as possible to the left without experiencing pain. (Click) Click a third time to get reading.



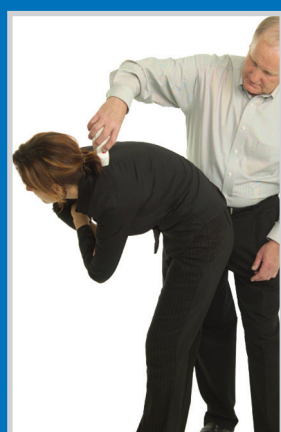
Thoracic Rotation-Left
(T-12 Starting Position) With the patient still in the same position, place unit on T-12 (ear-to-ear). (Click)



Thoracic Rotation-Left (T-12 Ending Position) Ask the patient to return to the neutral position. (Click) Click a third time to get reading.



Thoracic Rotation-Right
(T-1 Starting Position) Ask patient to bend forward. Place the unit on T-1 (ear-to-ear). (Click)



Thoracic Rotation-Right (T-1 Ending Position) Ask the patient to rotate the trunk as far as possible to the right without experiencing pain. (Click) Click a third time to get reading.



Thoracic Rotation-Right
(T-12 Starting Position) With the patient still in the same position, place unit on T-12 (ear-to-ear). (Click)



Thoracic Rotation-Right (T-12 Ending Position) Ask the patient to return to the neutral position. (Click) Click a third time to get reading.

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SHOULDER FLEXION

Tested Individual: Supine
Shoulder Position:
Flexed 90 degrees
Dynamometer Position:
Just proximal to elbow

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MUSCLE TESTING POSITIONS

Diagrams indicate muscle tests with transducer placement, proper positioning and stabilization for test



SHOULDER EXTENSION

Tested Individual: Supine
Shoulder Position:
Flexed 90 degrees
Dynamometer Position:
Just proximal to elbow



SHOULDER ABDUCTION

Tested Individual: Supine
Shoulder Position:
Abducted 90 degrees
Dynamometer Position:
Just proximal to elbow



SHOULDER EXTERNAL ROTATION

Tested Individual: Supine
Shoulder Position:
Abducted 45 degrees
Elbow Position:
Flexed 90 degrees
Dynamometer Position:
Just proximal to wrist



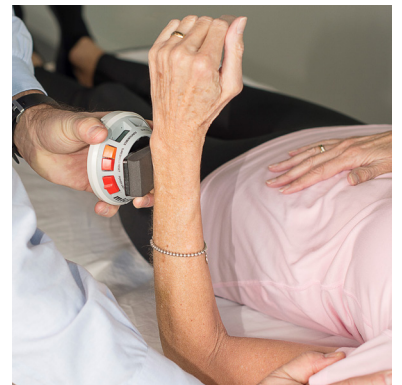
SHOULDER INTERNAL ROTATION

Tested Individual: Supine
Shoulder Position:
Abducted 45 degrees
Elbow Position:
Flexed 90 degrees
Dynamometer Position:
Just proximal to wrist



ELBOW FLEXION

Tested Individual: Supine
Elbow Position:
90 degrees
Dynamometer Position:
Just proximal to wrist



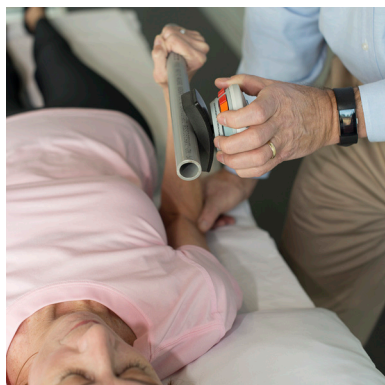
ELBOW EXTENSION

Tested Individual: Supine
Elbow Position:
90 degrees
Dynamometer Position:
Just proximal to wrist



FOREARM PRONATION

Tested Individual: Supine
Elbow Position:
90 degrees
Dynamometer Position:
Against dowel 20cm from
dowel held in hand



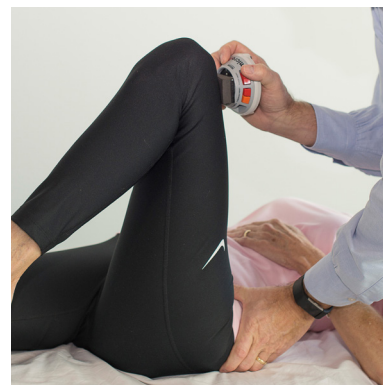
FOREARM SUPINATION

Tested Individual: Supine
Elbow Position:
90 degrees
Dynamometer Position:
Against dowel 20cm from
dowel held in hand



WRIST EXTENSION

Tested Individual: Supine
Elbow Position:
90 degrees
Dynamometer Position:
Just proximal to
metacarpal phalangeal
joints of hand



HIP FLEXION

Tested Individual: Supine
Hip Position:
Flexed 90 degrees
Dynamometer Position:
Just proximal to femoral
condyles



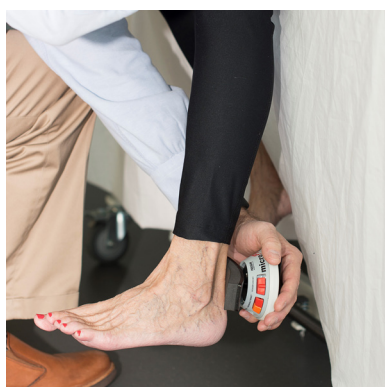
HIP ABDUCTION

Tested Individual: Supine
Hip Position:
Extended & abducted 0
degrees
Dynamometer Position:
Just proximal to lateral
knee joint line



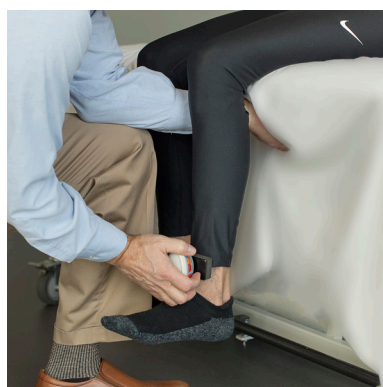
HIP EXTENSION

Tested Individual: Supine
Lower Limb Position:
Knee extended with distal
limb supported on block
Dynamometer Position:
Just distal to malleoli on
Achille's tendon.



KNEE FLEXION

Tested Individual: Sitting
Lower Limb Position:
Hip & knee flexed 90
degrees
Dynamometer Position:
Just distal to malleoli on a
Achilles tendon.



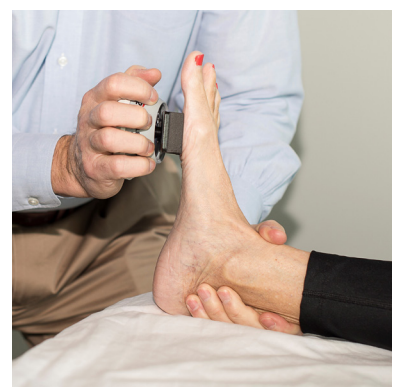
KNEE EXTENSION

Tested Individual: Sitting
Lower Limb Position:
Hip & knee flexed 90
degrees
Dynamometer Position:
Just proximal to malleoli



ANKLE DORSIFLEXION

Tested Individual: Supine
Lower Limb Position:
Knee extended & ankle in
neutral dorsiflexion
Dynamometer Position:
Just proximal to
metacarpal phalangeal
joints

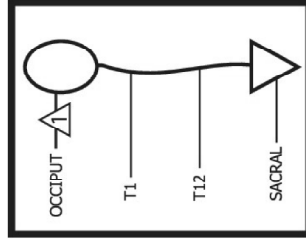


ANKLE PLANTARFLEXION

Tested Individual: Supine
Lower Limb Position:
Knee extended & ankle in
neutral dorsiflexion
Dynamometer Position:
Over metacarpal
phalangeal joints

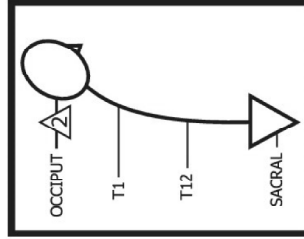
OCCIPITAL STARTING POSITION

Place unit on top of head. *(Click)*



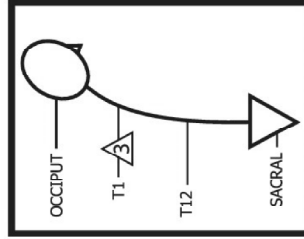
OCCIPITAL ENDING POSITION

Have patient go through motion. *(Click)*
Click a third time to get result.



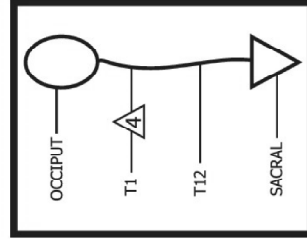
T-1 STARTING POSITION

With patient in the same position
place unit on T-1. *(Click)*



T-1 ENDING POSITION

Have patient return to neutral
position. *(Click)*
Click a third time to get result.



microFETTM 3

CERVICAL ROM TEST

☐ Flexion ☐ Extension
(check appropriate test)

Repeat 3 to 6 times to get a valid set of 3 consecutive trials within 5 degrees or 10%, whichever is greater of the mean trial of the 3 you choose.

Test 1 Test 2 Test 3

Occipital Value

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T-1 Value

--	--	--

ROM Results

--	--	--

Test 4 Test 5 Test 6

Occipital Value

--	--	--

T-1 Value

--	--	--

ROM Results

--	--	--

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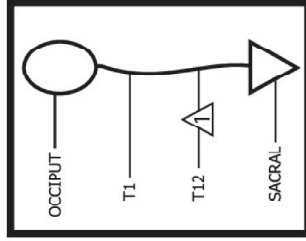
LUMBAR ROM TEST

☐ Flexion ☐ Extension
(check appropriate test)

Repeat 3 to 6 times to get a valid set of 3 consecutive trials within 5 degrees or 10%, whichever is greater of the mean trial of the 3 you choose.

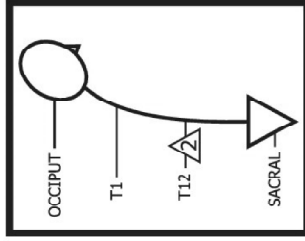
T-12 STARTING POSITION

Place unit on T-12. (Click)



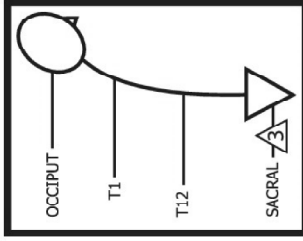
T-12 ENDING POSITION

Have patient go through motion. (Click)
Click a third time to get result.



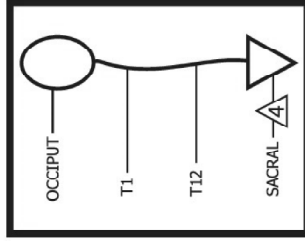
S-1 STARTING POSITION

With patient in same position
place unit on S-1. (Click)



S-1 ENDING POSITION

Have patient return to neutral
position. (Click)
Click a third time to get result.



T-12 Value

S-1 Value

ROM Results

T-12 Value

S-1 Value

ROM Results

Test 1 Test 2 Test 3

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Test 4 Test 5 Test 6

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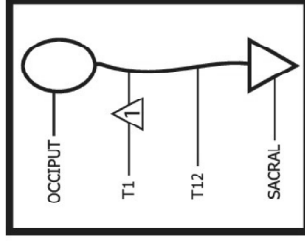
THORACIC ROM TEST

☐ Flexion ☐ Extension
(check appropriate test)

Repeat 3 to 6 times to get a valid set of 3 consecutive trials within 5 degrees or 10%, whichever is greater of the mean trial of the 3 you choose.

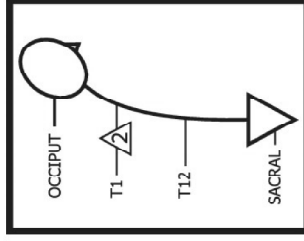
T-1 STARTING POSITION

Place unit on T-1. (Click)



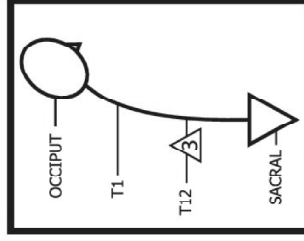
T-1 ENDING POSITION

Have patient go through motion. (Click)
Click a third time to get result.



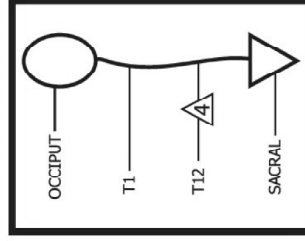
T-12 STARTING POSITION

With patient in same position.
place unit on T12. (Click)



T-12 ENDING POSITION

Have patient return to neutral position. (Click)
Click a third time to get result.



Test 1 Test 2 Test 3

T1 Value

--	--	--

T12 Value

--	--	--

ROM Results

--	--	--

Test 4 Test 5 Test 6

T1 Value

--	--	--

T12 Value

--	--	--

ROM Results

--	--	--

UPPER BODY

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Muscle Testing Reference Sheet



Patient Name _____

Date _____

LEFT

TEST 1 TEST 2 TEST 3

FOREARM

SUPINATOR GROUP

PRONATOR GROUP

WRIST

FLEX. CARPI RAD.

PRONATOR GROUP

EXT. CARPI RAD. & BR.

EXT. CARPI ULN.

RIGHT

TEST 1 TEST 2 TEST 3

FINGERS

LUMBRICALS

FLEX. DIGIT. SUP.

FLEX. DIGIT. PROF.

EXT. DIGIT. COM.

PALMAR INTEROSSEI

DORSAL INTEROSSEI

THUMB

FLEX. POLL. BR.

FLEX. POLL. LG.

EXT. POLL. BR.

EXT. POLL. LG.

ABD. POLL. BR.

ABD. POLL. LG.

UPPER BODY

LEFT

TEST 1 TEST 2 TEST3

STERNOCLEIDOMASTOID
EXTENSION GROUP

SCAPULA

SERRATUS ANTERIOR
TRAPEZIUS (SUP)
TRAPEZIUS (INF)
TRAPEZIUS (MIDDLE)
RHOMBOIDS

SHOULDER

DELTOID (ANT)
LATASSIMUS DORSI
TERES MAJOR
DELTOID (MIDDLE)
DELTOID (POST.)
PECTORALIS MAJOR
LATERAL ROTATOR GROUP
MEDIAL ROTATOR GROUP

ELBOW

BICEPS BRACHII
BRACHIALIS
BRACHIORADIALIS
TRICEPS BRACHII

RIGHT

TEST 1 TEST 2 TEST3

LOWER BODY

HOGGAN Scientific, LLC

Muscle Testing Reference Sheet



Patient Name _____

Date _____

LEFT

TEST 1 TEST 2 TEST3

HIP

ILIOPSOAS

SARTORIUS

GLUTEUS MAXIMUS

GLUTEUS MEDIUS

TENSOR FASCIA LATA.

ADDUCTOR GROUP

LATERAL ROTATOR GROUP

MEDIAL ROTATOR GROUP

TEST 1 TEST 2 TEST3

RIGHT

KNEE

BICEPS FEMORIS

HAMSTRINGS

QUADRICEPS FEMORIS

ANKLE

GASTROCNEMIUS

SOLEUS

FOOT

TIBIALIS ANTERIOR

TIBIALIS POSTERIOR

PERONEUS BREVIS

PERONEUS LONGUS

LOWER BODY

HOGGAN Scientific, LLC

Muscle Testing Reference Sheet



Patient Name _____

Date _____

LEFT

TEST 1 TEST 2 TEST3

TOES

LUMBRICALS
FLEX. DIGIT. BR.
FLEX. DIGIT. LG.
EXT. DIGIT LG.
EXT. DIGIT BR.

RIGHT

TEST 1 TEST 2 TEST3

HALLUX

FLEX. HALL. BR.
FLEX. HALL. LG.
EXT. HALL. BR.
EXT. HALL. LG.

