

Fugl-Meyer Assessment

Name: _____ Date: _____

Evaluator's Name: _____ Evaluator's Signature: _____

Fugl-Meyer Assessment Upper Extremity (FMA-UE)

A. Upper Extremity

I. Reflex Activity

	None = 0	Can be elicited = 2
Flexors: Biceps and Fingers	☐ None	☐ Can be elicited
Extensors: Triceps	☐ None	☐ Can be elicited

Subtotal I: (____ / 4)

II. Volitional Movement Within Dynamic Flexor/Extensor Synergies (w/o gravitational help)

Flexor Synergy: Hand from contralateral knee to ipsilateral ear.

Extensor Synergy: Hand from ipsilateral ear to contralateral knee.

		None = 0	Partial = 1	Full = 2
Flexor Energy	Shoulder • Retraction • Elevation • Abduction (90°) • External rotation	☐ None ☐ None ☐ None ☐ None	☐ Partial ☐ Partial ☐ Partial ☐ Partial	☐ Full ☐ Full ☐ Full ☐ Full
	Elbow • Flexion	☐ None	☐ Partial	☐ Full
	Forearm • Supination	☐ None	☐ Partial	☐ Full
Extensor Synergy	Shoulder • Adduction/Internal Rotation	☐ None	☐ Partial	☐ Full
	Elbow • Extension	☐ None	☐ Partial	☐ Full
	Forearm • Pronation	☐ None	☐ Partial	☐ Full

Subtotal II: (____ / 18)

III. Volitional movement mixing synergies (without compensation)

	Score Guide	None = 0	Partial = 1	Full = 2
Hand to Lumbar Spine hand on lap	0 = cannot perform or hand in front of ant-sup iliac spine 1 = hand behind ant-sup iliac spine (without compensation) 2 = hand to lumbar spine (without compensation)	☐ None	☐ Partial	☐ Full
Shoulder flexion 0°- 90° elbow at 0° pronation-supination 0°	0 = immediate abduction or elbow flexion 1 = abduction or elbow flexion during movement 2 = flexion 90°, no shoulder abduction or elbow flexion	☐ None	☐ Partial	☐ Full
Shoulder flexion 0°- 90° elbow at 0° pronation-supination 0°	0 = immediate abduction or elbow flexion 1 = abduction or elbow flexion during movement 2 = flexion 90°, no shoulder abduction or elbow flexion	☐ None	☐ Partial	☐ Full

Subtotal III: (____ / 6)

IV. Volitional movement with little or no synergy

	Score Guide	None = 0	Partial = 1	Full = 2
Shoulder abduction 0 - 90° elbow at 0° forearm neutral	0 = immediate supination or elbow flexion 1 = supination or elbow flexion during movement 2 = abduction 90°, maintains extension and pronation	☐ None	☐ Partial	☐ Full
Shoulder flexion 90° - 180° elbow at 0° pronation-supination 0°	0 = immediate abduction or elbow flexion 1 = abduction or elbow flexion during movement 2 = flexion 180°, no shoulder abduction or elbow flexion	☐ None	☐ Partial	☐ Full

Fugl-Meyer AR, Jaasko L, Leyman I, Olsson S, Steglind S: The post-stroke hemiplegic patient. A method for evaluation of physical performance. Scand J Rehabil Med 1975, 7:13-31. Rehabilitation Medicine, University of Gothenburg

	Score Guide	None = 0	Partial = 1	Full = 2
Pronation/ supination elbow at 0° shoulder at 30°- 90° flexion	0 = no pronation/supination, starting position impossible 1 = limited pronation/supination, maintains start position 2 = full pronation/supination, maintains starting position	☐ None	☐ Partial	☐ Full

Subtotal IV: (____ / 6)

V. Normal Reflex Activity

Note: Only assess if the patient gets a full score of 6 (six) points in part IV. Compare with the unaffected side.

	Score Guide	None = 0	Partial = 1	Full = 2
Biceps, triceps, finger flexors	0 = 2 of 3 reflexes markedly hyperactive 1 = 1 reflex markedly hyperactive or at least 2 reflexes lively 2 = maximum of 1 reflex lively, none hyperactive	☐ None	☐ Partial	☐ Full

Subtotal IV: (____ / 2)

TOTAL A: (____ /36)

B. Wrist

Note: Check the passive range of motion prior to testing. You may provide support at the elbow, take/hold at the starting position only. Do not support the wrist.

	Score Guide	None = 0	Partial = 1	Full = 2
Stability at 15° dorsiflexion elbow at 90°, forearm pronated shoulder at 0°	0 = less than 15° active dorsiflexion 1 = dorsiflexion 15°, no resistance tolerated 2 = maintains dorsiflexion against resistance	☐ None	☐ Partial	☐ Full
Repeated dorsiflexion / volar flexion elbow at 90°, forearm pronated shoulder at 0°, slight finger flexion	0 = cannot perform volitionally 1 = limited active range of motion 2 = full active range of motion, smoothly	☐ None	☐ Partial	☐ Full

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	Score Guide	None = 0	Partial = 1	Full = 2
Stability at 15° dorsiflexion elbow at 0°, forearm pronated slight shoulder flexion/abduction	0 = less than 15° active dorsiflexion 1 = dorsiflexion 15°, no resistance tolerated 2 = maintains dorsiflexion against resistance	☐ None	☐ Partial	☐ Full
Repeated dorsiflexion / volar flexion elbow at 0°, forearm pronated slight shoulder flexion/abduction	0 = cannot perform volitionally 1 = limited active range of motion 2 = full active range of motion, smoothly	☐ None	☐ Partial	☐ Full
Circumduction elbow at 90° forearm pronated shoulder at 0°	0 = cannot perform volitionally 1 = jerky movement or incomplete 2 = complete and smooth circumduction	☐ None	☐ Partial	☐ Full

TOTAL B: (____ /10)

C. Hand

Note: Compare with unaffected hand. You may provide support to keep the 90° flexion. Do not support the wrist. The objects must be interposed and the patient must have an active grasp on them.

	Score Guide	None = 0	Partial = 1	Full = 2
Mass flexion from full active or passive extension		☐ None	☐ Partial	☐ Full
Mass extension from full active or passive flexion		☐ None	☐ Partial	☐ Full
GRASP				

	Score Guide	None = 0	Partial = 1	Full = 2
Hook grasp flexion in PIP and DIP (digits II-V) extension in MCP II-V	0 = cannot be performed 1 = can hold position but weak 2 = maintains position against resistance	☐ None	☐ Partial	☐ Full
Thumb adduction 1-st CMC, MCP, IP at 0° scrap of paper between thumb and 2-nd MCP joint	0 = cannot be performed 1 = can hold paper but not against tug 2 = can hold paper against a tug	☐ None	☐ Partial	☐ Full
Pincer grasp, opposition pulpa of the thumb against the pulpa of 2nd finger Pencil tug upward	0 = cannot be performed 1 = can hold pencil but not against tug 2 = can hold pencil but not against tug	☐ None	☐ Partial	☐ Full
Cylinder grasp cylinder shaped object (small can) tug upward opposition of thumb and fingers	0 = cannot be performed 1 = can hold cylinder but not against tug 2 = can hold cylinder against a tug	☐ None	☐ Partial	☐ Full
Spherical grasp fingers in abduction/flexion thumb opposed tennis ball tug away	0 = cannot be performed 1 = can hold ball but not against tug 2 = can hold ball against a tug	☐ None	☐ Partial	☐ Full

TOTAL C: (____/14)

D. Coordination/Speed

Note: Do the test seated, one trial per arm. Ask the patient to close their eyes. Then, using the tip of their index finger, touch the knee to the nose five (5) times as fast as possible.

	Score Guide	Marked = 0	Slight = 0	None = 2
Tremor		☐ Marked	☐ Slight	☐ None

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	Score Guide	Marked = 0	Slight = 0	None = 2
Dysmetria	0 = pronounced or unsystematic 1 = slight and systematic 2 = no dysmetria	☐ Marked	☐ Slight	☐ None
Time Start and end with the hand on the knee	0 = 6 or more seconds slower than the unaffected side 1 = 2-5 seconds slower than the unaffected side 2 = less than 2 seconds difference	☐ Marked	☐ Slight	☐ None

TOTAL D: (____ /6)

TOTAL A - D: (____ /66)

Fugl-Meyer Assessment Lower Extremity (FMA-UE)

E. Lower Extremity

I. Reflex Activity

	None = 0	Can be elicited = 2
Flexors: Knee flexors	☐ None	☐ Can be elicited
Extensors: patellar, Achilles (at least one)	☐ None	☐ Can be elicited

Subtotal I: (____ / 4)

II. Volitional Movement Within Synergies (supine position)

Guide:

- **Flexor Synergy:** Maximal hip flexion (abduction/external rotation), maximal flexion in knee and ankle joint (palpate distal tendons to ensure active knee flexion).
- **Extensor Synergy:** From flexor synergy to hip extension/adduction, knee extension, and ankle plantar flexion. Resistance is applied to ensure active movement, evaluate both movement and strength (compare with the unaffected side)

		None = 0	Partial = 1	Full = 2
Flexor Synergy	Hip Flexion	☐ None	☐ Partial	☐ Full
	Knee Flexion	☐ None	☐ Partial	☐ Full
	Ankle Dorsiflexion	☐ None	☐ Partial	☐ Full

		None = 0	Partial = 1	Full = 2
Extensor Synergy	Hip Extension	☐ None	☐ Partial	☐ Full
	Hip Adduction	☐ None	☐ Partial	☐ Full
	Knee Extension	☐ None	☐ Partial	☐ Full
	Ankle Plantar Flexion	☐ None	☐ Partial	☐ Full

Subtotal II: (____ / 14)

III. Volitional movement mixing synergies

Note: Have your patient be in a sitting position with the knee 10 cm from the edge of the bed/chair.

	Score Guide	None = 0	Partial = 1	Full = 2
Knee flexion from actively or passively extended knee	0 = no active motion 1 = less than 90° active flexion, palpate tendons of hamstrings 2 = more than 90° active flexion	☐ None	☐ Partial	☐ Full
Ankle dorsiflexion compare with unaffected side	0 = no active motion 1 = limited dorsiflexion 2 = complete dorsiflexion	☐ None	☐ Partial	☐ Full

Subtotal III: (____ / 4)

IV. Volitional movement with little or no synergy

Note: Have your patient do this in a standing position with hip at 0°

	Score Guide	None = 0	Partial = 1	Full = 2
Knee flexion to 90° hip at 0°, balance support is allowed	0 = no active motion or immediate, simultaneous hip flexion 1 = less than 90° knee flexion and/or hip flexion during movement 2 = at least 90° knee flexion without simultaneous hip flexion	☐ None	☐ Partial	☐ Full
Ankle dorsiflexion compare with unaffected side	0 = no active motion 1 = limited dorsiflexion 2 = complete dorsiflexion	☐ None	☐ Partial	☐ Full

Subtotal IV: (____ / 4)

V. Normal reflex Activity

Note: Have your patient do this in a standing position with hip at 0°

	Score Guide	Hyper = 0	Lively = 1	Normal = 2
Reflex activity knee flexors, Patellar, Achilles	0 = no active motion or immediate, simultaneous hip flexion 1 = less than 90° knee flexion and/or hip flexion during movement 2 = at least 90° knee flexion without simultaneous hip flexion	☐ Hyper	☐ Lively	☐ Normal

Subtotal V: (/ 2)

F. Coordination/Speed

Note: Do the test in a supine position, one trial per leg. Ask the patient to close their eyes. Then, using the heel of their foot, touch the knee cap of the opposite leg five (5) times as fast as possible.

	Score Guide	Marked = 0	Slight = 0	None = 2
Tremor		☐ Marked	☐ Slight	☐ None
Dysmetria	0 = pronounced or unsystematic 1 = slight and systematic 2 = no dysmetria	☐ Marked	☐ Slight	☐ None
Time Start and end with the hand on the knee	0 = 6 or more seconds slower than the unaffected side 1 = 2-5 seconds slower than the unaffected side 2 = less than 2 seconds difference	☐ Marked	☐ Slight	☐ None

TOTAL F: (____ /6)

TOTAL E - F: (____ /34)

G. Balance

	Score Guide	None = 0	Full = 2
Sit without Support	0 = Can't maintain position without support 2 = Can sit longer than 5 minutes	☐ None	☐ Full

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	Score Guide	None = 0	Full = 2
Parachute reaction on nonaffected side	0 = Unable to balance 2 = Balances by abducting arm and using the elbow to catch	☐ None	☐ Full
Parachute reaction on affected side	0 = Unable to balance 2 = Balances by abducting arm and using the elbow to catch	☐ None	☐ Full
Supported Standing	0 = Can't stand 2 = Can stand for more than 1 minute	☐ None	☐ Full
Standing without Support	0 = Can't stand 2 = Can stand with good balance for more than 1 minute	☐ None	☐ Full
Stand on Nonaffected Leg	0 = Cannot maintain balance more than 1-2 seconds 2 = Can balance for more than 10 seconds	☐ None	☐ Full
Stand on Affected Leg	0 = Cannot maintain balance for more than 1-2 seconds 2 = Can balance for more than 10 seconds	☐ None	☐ Full

TOTAL G: (____ /14)

H. Sensation

Upper Extremity

Note: Have your patient do the test with their eyes closed. Compare the results with the unaffected side.

		Anesthesia = 0	Hypoesthesia/ Dysesthesia = 1	Normal = 2
Light touch	upper arm, forearm palmary surface of the hand	☐ 0 ☐ 0	☐ 1 ☐ 1	☐ 2 ☐ 2
		Less than 3/4 correct or absence = 0	3/4 correct or considerable difference = 1	correct 100%, little or no difference = 2
Position small alterations in the position	Shoulder elbow wrist thumb (IP-joint)	☐ 0 ☐ 0 ☐ 0 ☐ 0	☐ 1 ☐ 1 ☐ 1 ☐ 1	☐ 2 ☐ 2 ☐ 2 ☐ 2

TOTAL H Upper Extremity: (____ / 12)

Lower Extremity

Note: Have your patient do the test with their eyes closed. Compare the results with the unaffected side.

		Anesthesia = 0	Hypoesthesia/ Dysesthesia = 1	Normal = 2
Light touch	Leg	☐ 0	☐ 1	☐ 2
	Foot Sole	☐ 0	☐ 1	☐ 2
		Less than 3/4 correct or absence = 0	3/4 correct or considerable difference = 1	correct 100%, little or no difference = 2
Position small alterations in the position	Hip	☐ 0	☐ 1	☐ 2
	Knee	☐ 0	☐ 1	☐ 2
	Ankle	☐ 0	☐ 1	☐ 2
	Great Toe (IP-Joint)	☐ 0	☐ 1	☐ 2

TOTAL H Lower Extremity: (____ / 12)

I. Passive Joint Motion

Upper Extremity

Note: Have your patient do the test in a sitting position. Compare with the unaffected side.

	Only a few degrees (less than 10° in shoulder) = 0	Decreased = 1	Normal = 2
Shoulder			
Flexion (0° - 180°)	☐ 0	☐ 1	☐ 2
Abduction (0°-90°)	☐ 0	☐ 1	☐ 2
External rotation	☐ 0	☐ 1	☐ 2
Internal rotation	☐ 0	☐ 1	☐ 2
Elbow			
Flexion	☐ 0	☐ 1	☐ 2
Extension	☐ 0	☐ 1	☐ 2
Forearm			
Pronation	☐ 0	☐ 1	☐ 2
Supination	☐ 0	☐ 1	☐ 2
Wrist			
Flexion	☐ 0	☐ 1	☐ 2
Extension	☐ 0	☐ 1	☐ 2

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	Only a few degrees (less than 10° in shoulder) = 0	Decreased = 1	Normal = 2
Fingers			
Flexion	☐ 0	☐ 1	☐ 2
Extension	☐ 0	☐ 1	☐ 2

TOTAL I Upper Extremity: (___ / 24)

Lower Extremity

Note: Have your patient do the test in a supine position. Compare with the unaffected side.

	Only a few degrees (less than 10° in shoulder) = 0	Decreased = 1	Normal = 2
Hip			
Flexion	☐ 0	☐ 1	☐ 2
Abduction	☐ 0	☐ 1	☐ 2
External rotation	☐ 0	☐ 1	☐ 2
Internal rotation	☐ 0	☐ 1	☐ 2
Knee			
Flexion	☐ 0	☐ 1	☐ 2
Extension	☐ 0	☐ 1	☐ 2
Ankle			
Dorsiflexion	☐ 0	☐ 1	☐ 2
Plantar Flexion	☐ 0	☐ 1	☐ 2
Foot			
Pronation	☐ 0	☐ 1	☐ 2
Extension	☐ 0	☐ 1	☐ 2

TOTAL I Upper Extremity: (___ / 20)

J. Joint Pain

Upper Extremity

Note: This is during passive motion.

	Pronounced pain during movement or very marked pain at the end of the movement = 0	Some Pain = 1	No Pain = 2
Shoulder			
Flexion (0° - 180°)	☐ 0	☐ 1	☐ 2
Abduction (0°-90°)	☐ 0	☐ 1	☐ 2
External rotation	☐ 0	☐ 1	☐ 2
Internal rotation	☐ 0	☐ 1	☐ 2
Elbow			
Flexion	☐ 0	☐ 1	☐ 2
Extension	☐ 0	☐ 1	☐ 2
Forearm			
Pronation	☐ 0	☐ 1	☐ 2
Supination	☐ 0	☐ 1	☐ 2
Wrist			
Flexion	☐ 0	☐ 1	☐ 2
Extension	☐ 0	☐ 1	☐ 2
Fingers			
Flexion	☐ 0	☐ 1	☐ 2
Extension	☐ 0	☐ 1	☐ 2

TOTAL J Upper Extremity: (____ / 24)

Lower Extremity

Note: This is during passive motion.

	Pronounced pain during movement or very marked pain at the end of the movement = 0	Some Pain = 1	No Pain = 2
Hip			
Flexion	☐ 0	☐ 1	☐ 2
Abduction	☐ 0	☐ 1	☐ 2
External rotation	☐ 0	☐ 1	☐ 2
Internal rotation	☐ 0	☐ 1	☐ 2

	Pronounced pain during movement or very marked pain at the end of the movement = 0	Some Pain = 1	No Pain = 2
Knee			
Flexion	☐ 0	☐ 1	☐ 2
Extension	☐ 0	☐ 1	☐ 2
Ankle			
Dorsiflexion	☐ 0	☐ 1	☐ 2
Plantar Flexion	☐ 0	☐ 1	☐ 2
Foot			
Pronation	☐ 0	☐ 1	☐ 2
Extension	☐ 0	☐ 1	☐ 2

TOTAL J Lower Extremity: (___ / 20)

Score Summary

A. UPPER EXTREMITY	___ / 36
B. WRIST	___ / 10
C. HAND	___ / 14
D. COORDINATION/SPEED	___ / 6
TOTAL A-D (Motor Function)	___ / 66

E. LOWER EXTREMITY	___ / 28
F. COORDINATION/SPEED	___ / 6
TOTAL E-F (Motor Function)	___ / 34

G. BALANCE	___ / 14
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H. SENSATION (Upper Extremity)	_____ / 12
H. SENSATION (Lower Extremity)	_____ / 12
I. PASSIVE JOINT MOTION (Upper Extremity)	_____ / 24
I. PASSIVE JOINT MOTION (Lower Extremity)	_____ / 20
J. JOINT PAIN (Upper Extremity)	_____ / 24
J. JOINT PAIN (Lower Extremity)	_____ / 20
TOTAL A-F (Motor Function)	_____ / 100

Additional Notes