# **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
	Shoulder <ul> <li>Retraction</li> <li>Elevation</li> <li>Abduction (90°)</li> <li>External rotation</li> </ul>	None None None None None None	Partial Partial Partial Partial Partial Partial	Full Full Full Full Full
Flexor Energy	Elbow • Flexion	None	Partial	🗌 Full
	Forearm <ul> <li>Supination</li> </ul>	None	Partial	🗌 Full
	Shoulder <ul> <li>Adduction/Internal Rotation</li> </ul>	None	Partial	🗌 Full
Extensor Synergy	Elbow • Extension	None	Partial	🗌 Full
	Forearm <ul> <li>Pronation</li> </ul>	None	Partial	🗌 Full
			Subtotal	<b>II:</b> (/ 18 )



### III. Volitional movement mixing synergies (without compensation)

	Score Guide	None = 0	Partial = 1	Full = 2
Hand to Lumbar Spine hand on lap	<ul> <li>0 = cannot perform or hand in front of ant-sup iliac spine</li> <li>1 = hand behind ant-sup iliac spine (without compensation)</li> <li>2 = hand to lumbar spine (without compensation)</li> </ul>	None None	Partial	🗌 Full
<b>Shoulder flexion 0°- 90°</b> elbow at 0° pronation-supination 0°	<ul> <li>0 = immediate abduction or elbow flexion</li> <li>1 = abduction or elbow flexion during movement</li> <li>2 = flexion 90°, no shoulder abduction or elbow flexion</li> </ul>	None	Partial	Full
<b>Shoulder flexion 0°- 90°</b> elbow at 0° pronation-supination 0°	<ul> <li>0 = immediate abduction or elbow flexion</li> <li>1 = abduction or elbow flexion during movement</li> <li>2 = flexion 90°, no shoulder abduction or elbow flexion</li> </ul>	None 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	<ul> <li>0 = immediate supination or elbow flexion</li> <li>1 = supination or elbow flexion during movement</li> <li>2 = abduction 90°, maintains extension and pronation</li> </ul>	None None	Partial	🗍 Full
<b>Shoulder flexion</b> 90° - 180° elbow at 0° pronation-supination 0°	<ul> <li>0 = immediate abduction or elbow flexion</li> <li>1 = abduction or elbow flexion during movement</li> <li>2 = flexion 180°, no shoulder abduction or elbow flexion</li> </ul>	None None	Partial	🗍 Full



	Score Guide	None = 0	Partial = 1	Full = 2
Pronation/ supination	<b>0 =</b> no pronation/supination, starting position impossible	None	Partial	🗌 Full
elbow at 0°	<ul> <li>1 = limited pronation/supination,</li> <li>maintains start position</li> </ul>			
shoulder at 30°- 90° flexion	<ul> <li><b>2</b> = full pronation/supination,</li> <li>maintains starting position</li> </ul>			
			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
	<b>0</b> = 2 of 3 reflexes markedly hyperactive	None	Partial	🗌 Full
Biceps, triceps, finger flexors	<ul><li>1 = 1 reflex markedly hyperactive or at least 2 reflexes lively</li></ul>			
	<b>2 =</b> maximum of 1 reflex lively, none hyperactive			
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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
<b>Stability at 15° dorsiflexion</b> elbow at 90°, forearm pronated shoulder at 0°	<ul> <li>0 = less than 15° active dorsiflexion</li> <li>1 = dorsiflexion 15°, no resistance tolerated</li> <li>2 = maintains dorsiflexion against resistance</li> </ul>	None	Partial	🗍 Full
Repeated dorsiflexion / volar flexion elbow at 90°, forearm pronated shoulder at 0°, slight finger flexion	<ul> <li>0 = cannot perform volitionally</li> <li>1 = limited active range of motion</li> <li>2 = full active range of motion, smoothly</li> </ul>	None None	Partial	Full



	Score Guide	None = 0	Partial = 1	Full = 2
Stability at 15° dorsiflexion elbow at 0°, forearm pronated slight shoulder flexion/abduction	<ul> <li>0 = less than 15° active dorsiflexion</li> <li>1 = dorsiflexion 15°, no resistance tolerated</li> <li>2 = maintains dorsiflexion against resistance</li> </ul>	None None	Partial	Full
Repeated dorsiflexion / volar flexion elbow at 0°, forearm pronated slight shoulder flexion/abduction	<ul> <li>0 = cannot perform volitionally</li> <li>1 = limited active range of motion</li> <li>2 = full active range of motion, smoothly</li> </ul>	None None	Partial	Full
<b>Circumduction</b> elbow at 90° forearm pronated shoulder at 0°	<ul> <li>0 = cannot perform volitionally</li> <li>1 = jerky movement or incomplete</li> <li>2 = complete and smooth circumduction</li> </ul>	None 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
<b>Mass flexion</b> from full active or passive extension		None None	Partial	🗍 Full
Mass extension from full active or passive flexion		None 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	<ul> <li>0 = cannot be performed</li> <li>1 = can hold position but weak</li> <li>2 = maintains position against resistance</li> </ul>	None None	Partial	🗍 Full
Thumb adduction 1-st CMC, MCP, IP at 0° scrap of paper between thumb and 2-nd MCP joint	<ul> <li>0 = cannot be performed</li> <li>1 = can hold paper but not against tug</li> <li>2 = can hold paper against a tug</li> </ul>	None None	Partial	Full
Pincer grasp, opposition pulpa of the thumb against the pulpa of 2nd finger Pencil tug upward	<ul> <li>0 = cannot be performed</li> <li>1 = can hold pencil but not against tug</li> <li>2 = can hold pencil but not against tug</li> </ul>	None	Partial	☐ Full
<b>Cylinder grasp</b> cylinder shaped object (small can) tug upward opposition of thumb and fingers	<ul> <li>0 = cannot be performed</li> <li>1 = can hold cylinder but not against tug</li> <li>2 = can hold cylinder against a tug</li> </ul>	None None	Partial	Full
Spherical grasp fingers in abduction/ flexion thumb opposed tennis ball tug away	<ul> <li>0 = cannot be performed</li> <li>1 = can hold ball but not against tug</li> <li>2 = can hold ball against a tug</li> </ul>	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



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

TOTAL D: ( \_\_\_\_\_ /6 )

TOTAL A - D: ( \_\_\_\_\_ /66 )

# **Fugl-Meyer Assessment Lower Extremity (FMA-UE)**

#### I. Reflex Activity

### **E.** Lower Extremity

	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 Knee Flexion Ankle Dorsiflexion	None None None None	Partial Partial Partial Partial	☐ Full ☐ Full ☐ Full



		None = 0	Partial = 1	Full = 2
Extensor Synergy	Hip Extension Hip Adduction Knee Extension Ankle Plantar Flexion	None None None None None None	Partial Partial Partial Partial Partial Partial	Full Full Full Full
			Subtotal	<b>II:</b> (/ 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	<ul> <li>0 = no active motion</li> <li>1 = less than 90° active flexion, palpate tendons of hamstrings</li> <li>2 = more than 90° active flexion</li> </ul>	None None	Partial	🗍 Full
Ankle dorsiflexion compare with unaffected side	<ul> <li>0 = no active motion</li> <li>1 = limited dorsiflexion</li> <li>2 = complete dorsiflexion</li> </ul>	None None	Partial	🗌 Full
			Subtotal	<b>III:</b> (/ 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°	<b>0</b> = no active motion or immediate, simultaneous hip flexion	None	Partial	Full
hip at 0°, balance support is allowed	1 = less than 90° knee flexion and/or hip flexion during movement			
	2 = at least 90° knee flexion without simultaneous hip flexion			
Ankle dorsiflexion compare with unaffected side	<ul> <li>0 = no active motion</li> <li>1 = limited dorsiflexion</li> <li>2 = complete dorsiflexion</li> </ul>	None None	Partial	Full
		1		1

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	<b>0</b> = no active motion or immediate, simultaneous hip flexion	Hyper	Lively	🗌 Normal
knee flexors, Patellar, Achilles	<ul> <li>1 = less than 90° knee flexion and/or hip flexion during movement</li> </ul>			
	<b>2 =</b> at least 90° knee flexion without simultaneous hip flexion			
			Subtotal	<b>V</b> :( /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	<ul><li>0 = pronounced or unsystematic</li><li>1 = slight and systematic</li></ul>	Marked	Slight	None None
	2 = no dysmetria			
Time Start and end with the	<b>0</b> = 6 or more seconds slower than the unaffected side	Marked	Slight	None
hand on the knee	1 = 2-5 seconds slower than the unaffected side			
	<b>2</b> = less than 2 seconds difference			

# TOTAL F: ( \_\_\_\_\_ /6 )

TOTAL E - F: ( \_\_\_\_ /34 )

### G. Balance

	Score Guide	None = 0	Full = 2
Sit without Support	<ul> <li>0 = Can't maintain position without support</li> <li>2 = Can sit longer than 5 minutes</li> </ul>	None	🗌 Full



	Score Guide	None = 0	Full = 2	
Parachute reaction on nonaffected side	<ul> <li>0 = Unable to balance</li> <li>2 = Balances by abducting arm and using the elbow to catch</li> </ul>	None None	Full	
Parachute reaction on affected side	<ul> <li>0 = Unable to balance</li> <li>2 = Balances by abducting arm and using the elbow to catch</li> </ul>	None None	Full	
Supported Standing	<ul><li>0 = Can't stand</li><li>2 = Can stand for more than 1 minute</li></ul>	None None	Full	
Standing without Support	<ul> <li>0 = Can't stand</li> <li>2 = Can stand with good balance for more than 1 minute</li> </ul>	None None	🗌 Full	
Stand on Nonaffected Leg	<ul> <li>0 = Cannot maintain balance more than 1-2 seconds</li> <li>2 = Can balance for more than 10 seconds</li> </ul>	None None	Full	
Stand on Affected Leg	<ul> <li>0 = Cannot maintain balance for more than 1-2 seconds</li> <li>2 = Can balance for more than 10 seconds</li> </ul>	None 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	1 1	2
		Less than 3/4 correct or absence = 0	3/4 correct or considerable difference = 1	correct 100%, little or no difference = 2
<b>Position</b> small alterations in the position	Shoulder elbow wrist thumb (IP-joint)	0 0 0 0	1 1 1 1 1	2 2 2 2 2 2
TOTAL H Upper Extremity ( 12)				

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 Foot Sole	0	□ 1 □ 1	2 2 2
		Less than 3/4 correct or absence = 0	3/4 correct or considerable difference = 1	correct 100%, little or no difference = 2
<b>Position</b> small alterations in the position	Hip Knee Ankle Great Toe (IP-Joint)	0 0 0 0 0	1 1 1 1	2 2 2 2 2 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

	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
Нір			
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**

