

Data Dictionary Codebook

IMACS Codebooks (PID: 483)

09/04/2026 5:18pm

Instruments	
Instrument	Form Name
Functional Index 3 (FI-3)	functional_index_3_fi_3

[Collapse all instruments](#)

	#	Variable / Field Name	Field Label <i>Field Note</i>	Field Attributes (Field Type, Validation, Choices, Calculations, etc.)				
Instrument: Functional Index 3 (FI-3) (functional_index_3_fi_3)								
	1	[<i>study_id</i>]	Study ID	text				
	2	[<i>fi3_imacs_number</i>]	Subject's IMACS Number	text, Required Custom alignment: RH				
	3	[<i>fi3_date_of_assess</i>]	Date of Assessment	text (date_mdy), Required Custom alignment: RH Field Annotation: @PREVENT-FUTUREDATE				
	4	[<i>fi3_assess_num</i>]	Assessment number	text, Required Custom alignment: RH				
	5	[<i>fi3_assessor</i>]	Assessor	text, Required Custom alignment: RH				
	6	[<i>fi3_time</i>]	Time	text (time), Required Custom alignment: RH				
	7	[<i>fi3_ue</i>]	Dominant limb - UE	radio, Required <table><tr><td>1</td><td>Left is the patient's dominant upper extremity limb</td></tr><tr><td>2</td><td>Right is the patient's dominant upper extremity limb</td></tr></table>	1	Left is the patient's dominant upper extremity limb	2	Right is the patient's dominant upper extremity limb
1	Left is the patient's dominant upper extremity limb							
2	Right is the patient's dominant upper extremity limb							
	8	[<i>fi3_le</i>]	Dominant limb - LE	radio, Required <table><tr><td>1</td><td>Left is the patient's dominant lower extremity limb</td></tr></table>	1	Left is the patient's dominant lower extremity limb		
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				2	Right is the patient's dominant lower extremity limb																				
9	[fi3_musc_group]	FUNCTIONAL INDEX 3 (FI-3) Muscle Group Metronome (beats/min) Repetitions % / max repetitions Muscle Exertion (Borg CR-10) Shoulder flexion(1 kg weight cuff)Repetitions: 0-60 Right 40 {fi3_should_flex_r_reps} {fi3_should_flex_r_reps_max} {fi3_should_flex_r_muscle} Left 40 {fi3_should_flex_l_reps} {fi3_should_flex_l_reps_max} {fi3_should_flex_l_muscle} Head Lift Repetitions: 0-30 40 {fi3_head_reps} {fi3_head_reps_max} {fi3_head_muscle} Hip Flexion Repetitions: 0-60 Right 40 {fi3_hip_flexion_r_reps} {fi3_hip_flexion_r_reps_max} {fi3_hip_flexion_r_muscle} Left 40 {fi3_hip_flexion_l_reps} {fi3_hip_flexion_l_reps_max} {fi3_hip_flexion_l_muscle}		descriptive																					
10	[fi3_should_flex_r_reps]	Right Shoulder Flexion: Repetitions (0-60)		text (integer, Min: 0, Max: 60), Required Custom alignment: RH																					
11	[fi3_should_flex_r_reps_max]	Right Shoulder Flexion: % / max repetitions %		calc Calculation: round(((fi3_should_flex_r_reps] / 60) * 100,2) Custom alignment: RH																					
12	[fi3_should_flex_r_muscle]	Right Shoulder Flexion: Muscle Exertion		dropdown, Required <table><tr><td>0</td><td>0 - Nothing at all</td></tr><tr><td>0.5</td><td>0.5 - Extremely weak</td></tr><tr><td>1</td><td>1 - Very weak</td></tr><tr><td>2</td><td>2 - Weak (light)</td></tr><tr><td>3</td><td>3 - Moderate</td></tr><tr><td>4</td><td>4 - Somewhat strong</td></tr><tr><td>5</td><td>5 - Strong (heavy)</td></tr><tr><td>6</td><td>6 - Between strong and very strong</td></tr><tr><td>7</td><td>7 - Very strong</td></tr><tr><td>8</td><td>8 - Between very strong and extremely strong, leaning more toward very strong</td></tr></table>		0	0 - Nothing at all	0.5	0.5 - Extremely weak	1	1 - Very weak	2	2 - Weak (light)	3	3 - Moderate	4	4 - Somewhat strong	5	5 - Strong (heavy)	6	6 - Between strong and very strong	7	7 - Very strong	8	8 - Between very strong and extremely strong, leaning more toward very strong
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13	[fi3_should_flex_l_reps]	Left Shoulder flexion: Repetitions (0-60)		text (integer, Min: 0, Max: 60), Required Custom alignment: RH																								
14	[fi3_should_flex_l_reps_max]	Left Shoulder Flexion (1 kg weight cuff): % / max repetitions %		calc Calculation: round(((fi3_should_flex_l_reps] / 60) * 100,2) Custom alignment: RH																								
15	[fi3_should_flex_l_muscle]	Left Shoulder Flexion Muscle Exertion		dropdown, Required <table><tr><td>0</td><td>0 - Nothing at all</td></tr><tr><td>0.5</td><td>0.5 - Extremely weak</td></tr><tr><td>1</td><td>1 - Very weak</td></tr><tr><td>2</td><td>2 - Weak (light)</td></tr><tr><td>3</td><td>3 - Moderate</td></tr><tr><td>4</td><td>4 - Somewhat strong</td></tr><tr><td>5</td><td>5 - Strong (heavy)</td></tr><tr><td>6</td><td>6 - Between strong and very strong</td></tr><tr><td>7</td><td>7 - Very strong</td></tr><tr><td>8</td><td>8 - Between very strong and extremely strong, leaning more toward very strong</td></tr><tr><td>9</td><td>9 - Between very strong and extremely strong, leaning more toward extremely strong</td></tr><tr><td>10</td><td>10 - Extremely strong (maximal)</td></tr></table> Custom alignment: LV	0	0 - Nothing at all	0.5	0.5 - Extremely weak	1	1 - Very weak	2	2 - Weak (light)	3	3 - Moderate	4	4 - Somewhat strong	5	5 - Strong (heavy)	6	6 - Between strong and very strong	7	7 - Very strong	8	8 - Between very strong and extremely strong, leaning more toward very strong	9	9 - Between very strong and extremely strong, leaning more toward extremely strong	10	10 - Extremely strong (maximal)
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16	[fi3_head_reps]	Head Lift: Repetitions (0-30)		text (integer, Min: 0, Max: 30), Required Custom alignment: RH																								

	17	[fi3_head_reps_max]	Head Lift: % / max repetitions %	calc Calculation: round(((fi3_head_reps] / 30) * 100,2) Custom alignment: RH																								
	18	[fi3_head_muscle]	Head Lift: Muscle Exertion	dropdown, Required <table><tr><td>0</td><td>0 - Nothing at all</td></tr><tr><td>0.5</td><td>0.5 - Extremely weak</td></tr><tr><td>1</td><td>1 - Very weak</td></tr><tr><td>2</td><td>2 - Weak (light)</td></tr><tr><td>3</td><td>3 - Moderate</td></tr><tr><td>4</td><td>4 - Somewhat strong</td></tr><tr><td>5</td><td>5 - Strong (heavy)</td></tr><tr><td>6</td><td>6 - Between strong and very strong</td></tr><tr><td>7</td><td>7 - Very strong</td></tr><tr><td>8</td><td>8 - Between very strong and extremely strong, leaning more toward very strong</td></tr><tr><td>9</td><td>9 - Between very strong and extremely strong, leaning more toward extremely strong</td></tr><tr><td>10</td><td>10 - Extremely strong (maximal)</td></tr></table> Custom alignment: LV	0	0 - Nothing at all	0.5	0.5 - Extremely weak	1	1 - Very weak	2	2 - Weak (light)	3	3 - Moderate	4	4 - Somewhat strong	5	5 - Strong (heavy)	6	6 - Between strong and very strong	7	7 - Very strong	8	8 - Between very strong and extremely strong, leaning more toward very strong	9	9 - Between very strong and extremely strong, leaning more toward extremely strong	10	10 - Extremely strong (maximal)
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	19	[fi3_hip_flexion_r_reps]	Right Hip Flexion: Repetitions (0-60)	text (integer, Min: 0, Max: 60), Required Custom alignment: RH																								
	20	[fi3_hip_flexion_r_reps_max]	Right Hip Flexion: % / max repetitions %	calc Calculation: round(((fi3_hip_flexion_r_reps] / 60) * 100,2)																								
	21	[fi3_hip_flexion_r_muscle]	Right Hip Flexion: Muscle Exertion	dropdown, Required <table><tr><td>0</td><td>0 - Nothing at all</td></tr><tr><td>0.5</td><td>0.5 - Extremely weak</td></tr><tr><td>1</td><td>1 - Very weak</td></tr><tr><td>2</td><td>2 - Weak (light)</td></tr></table>	0	0 - Nothing at all	0.5	0.5 - Extremely weak	1	1 - Very weak	2	2 - Weak (light)																
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	22	[fi3_hip_flexion_l_reps]	Left Hip Flexion: Repetitions (0-60)	text (integer, Min: 0, Max: 60), Required Custom alignment: RH																								
	23	[fi3_hip_flexion_l_reps_max]	Left Hip Flexion: % / max repetitions %	calc Calculation: round(((fi3_hip_flexion_l_reps] / 60) * 100,2) Custom alignment: RH																								
	24	[fi3_hip_flexion_l_muscle]	Left Hip Flexion: Muscle Exertion	<table><tr><td colspan="2">dropdown, Required</td></tr><tr><td>0</td><td>0 - Nothing at all</td></tr><tr><td>0.5</td><td>0.5 - Extremely weak</td></tr><tr><td>1</td><td>1 - Very weak</td></tr><tr><td>2</td><td>2 - Weak (light)</td></tr><tr><td>3</td><td>3 - Moderate</td></tr><tr><td>4</td><td>4 - Somewhat strong</td></tr><tr><td>5</td><td>5 - Strong (heavy)</td></tr><tr><td>6</td><td>6 - Between strong and very strong</td></tr><tr><td>7</td><td>7 - Very strong</td></tr><tr><td>8</td><td>8 - Between very strong and extremely strong, leaning more toward very strong</td></tr><tr><td>9</td><td>9 - Between very strong and extremely strong, leaning more toward extremely strong</td></tr></table>	dropdown, Required		0	0 - Nothing at all	0.5	0.5 - Extremely weak	1	1 - Very weak	2	2 - Weak (light)	3	3 - Moderate	4	4 - Somewhat strong	5	5 - Strong (heavy)	6	6 - Between strong and very strong	7	7 - Very strong	8	8 - Between very strong and extremely strong, leaning more toward very strong	9	9 - Between very strong and extremely strong, leaning more toward extremely strong
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	25	[fi3_table_2]	Limitations in performing the test Shoulder flexion Head Lift Hip Flexion Right Left Right Left Limitation Active ROM {fi3_active_rom_r_should} {fi3_active_rom_l_should} {fi3_active_rom_head} {fi3_lim_active_rom_r_hip} {fi3_active_rom_l_hip} Limitation of Passive ROM {fi3_passive_rom_r_should} {fi3_passive_rom_l_should} {fi3_passive_rom_head} {fi3_lim_passive_rom_r_hip} {fi3_passive_rom_l_hip} Used Alternate test position {fi3_alt_position_r_should} {fi3_alt_position_l_should} {fi3_alt_position_head} {fi3_alt_position_r_hip} {fi3_alt_position_l_hip} Subject fatigued with testing {fi3_fatigue_r_should} {fi3_fatigue_l_should} {fi3_fatigue_head} {fi3_fatigue_r_hip} {fi3_fatigue_l_hip} Poor effort {fi3_poor_effort_r_should} {fi3_poor_effort_l_should} {fi3_poor_effort_head} {fi3_poor_effort_r_hip} {fi3_poor_effort_l_hip} Other (Specify) {fi3_other_r_should} {fi3_should_flex_r_spfy} {fi3_other_l_should} {fi3_should_flex_l_spfy} {fi3_other_head} {fi3_head_lift_spfy} {fi3_other_r_hip} {fi3_hip_flex_r_spfy} {fi3_other_l_hip} {fi3_hip_flex_l_spfy}	descriptive	
	26	[fi3_comments]	Comments on performance of the Functional Index 3 Test	text	
	27	[fi3_dominant_should]	Repetitions performed with the dominant shoulder	calc Calculation: if([fi3_ue] = "1", [fi3_should_flex_l_reps], if([fi3_ue] = "2", [fi3_should_flex_r_reps], "")) Field Annotation: @HIDDEN	
	28	[fi3_dominant_hip]	Repetitions performed with the dominant hip	calc Calculation: if([fi3_le] = "1", [fi3_hip_flexion_l_reps], if([fi3_le] = "2", [fi3_hip_flexion_r_reps], "")) Field Annotation: @HIDDEN	
	29	[fi3_total_score]	FUNCTIONAL INDEX 3 Total Score: %	calc Calculation: if ([fi3_ue] = "" or [fi3_le] = "", "", round(sum([fi3_dominant_should], 2* [fi3_head_reps], [fi3_dominant_hip])*100/180, 0))	

30	[fi3_formula]	Formula for Total Score: 1- (Performed repetitions of shoulder flexion of dominant side + 2 × neck flexion repetitions + hip flexion on dominant side) /180OR 2- (% of maximal repetitions of shoulder flexion of dominant side + % of maximal repetitions of neck flexion + % of maximal repetitions of hip flexion on dominant side) / 3	descriptive
31	[fi3_active_rom_r_should]	Right Shoulder Flexion: Limitation Active ROM	checkbox, Required 1 fi3_active_rom_r_should__1
32	[fi3_passive_rom_r_should]	Right Shoulder Flexion: Limitation Passive ROM	checkbox, Required 1 fi3_passive_rom_r_should__1
33	[fi3_alt_position_r_should]	Right Shoulder Flexion: Used Alternate test position	checkbox, Required 1 fi3_alt_position_r_should__1
34	[fi3_fatigue_r_should]	Right Shoulder Flexion: Subject Fatigued with testing	checkbox, Required 1 fi3_fatigue_r_should__1
35	[fi3_poor_effort_r_should]	Right Shoulder Flexion: Poor effort	checkbox, Required 1 fi3_poor_effort_r_should__1
36	[fi3_other_r_should]	Right Shoulder Flexion: Other	checkbox, Required 1 fi3_other_r_should__1
37	[fi3_should_flex_r_spfy] Show the field ONLY if: [fi3_other_r_should(1)] = '1'	Specify other:	notes, Required
38	[fi3_active_rom_l_should]	Left Shoulder Flexion: Limitation Active ROM	checkbox, Required 1 fi3_active_rom_l_should__1
39	[fi3_passive_rom_l_should]	Left Shoulder Flexion: Limitation Passive ROM	checkbox, Required 1 fi3_passive_rom_l_should__1
40	[fi3_alt_position_l_should]	Left Shoulder Flexion: Used Alternate test position	checkbox, Required 1 fi3_alt_position_l_should__1
41	[fi3_fatigue_l_should]	Left Shoulder Flexion: Subject Fatigued with testing	checkbox, Required

				1 fi3_fatigue_l_should__1
42	[fi3_poor_effort_l_should]	Left Shoulder Flexion: Poor effort	checkbox, Required	1 fi3_poor_effort_l_should__1
43	[fi3_other_l_should]	Left Shoulder Flexion: Other	checkbox, Required	1 fi3_other_l_should__1
44	[fi3_should_flex_l_spfy] Show the field ONLY if: [fi3_other_l_should(1)] = '1'	Specify other:	notes, Required	
45	[fi3_active_rom_head]	Head Lift: Limitation Active ROM	checkbox, Required	1 fi3_active_rom_head__1
46	[fi3_passive_rom_head]	Head Lift: Limitation Passive ROM	checkbox, Required	1 fi3_passive_rom_head__1
47	[fi3_alt_position_head]	Head Lift: Used Alternate test position	checkbox, Required	1 fi3_alt_position_head__1
48	[fi3_fatigue_head]	Head Lift: Subject Fatigued with testing	checkbox, Required	1 fi3_fatigue_head__1
49	[fi3_poor_effort_head]	Head Lift: Poor effort	checkbox, Required	1 fi3_poor_effort_head__1
50	[fi3_other_head]	Head Lift: Other	checkbox, Required	1 fi3_other_head__1
51	[fi3_head_lift_spfy] Show the field ONLY if: [fi3_other_head(1)] = '1'	Specify other:	notes, Required	
52	[fi3_lim_active_rom_r_hip]	Right Hip Flexion: Limitation Active ROM	checkbox, Required	1 fi3_lim_active_rom_r_hip__1
53	[fi3_lim_passive_rom_r_hip]	Right Hip Flexion: Limitation Passive ROM	checkbox, Required	1 fi3_lim_passive_rom_r_hip__1

54	[fi3_alt_position_r_hip]	Right Hip Flexion: Used Alternate test position	checkbox, Required 1 fi3_alt_position_r_hip__1
55	[fi3_fatigue_r_hip]	Right Hip Flexion: Subject Fatigued with testing	checkbox, Required 1 fi3_fatigue_r_hip__1
56	[fi3_poor_effort_r_hip]	Right Hip Flexion: Poor effort	checkbox, Required 1 fi3_poor_effort_r_hip__1
57	[fi3_other_r_hip]	Right Hip Flexion: Other	checkbox, Required 1 fi3_other_r_hip__1
58	[fi3_hip_flex_r_spfy] Show the field ONLY if: [fi3_other_r_hip(1)] = '1'	Specify other:	notes, Required
59	[fi3_active_rom_l_hip]	Left Hip Flexion: Limitation Active ROM	checkbox, Required 1 fi3_active_rom_l_hip__1
60	[fi3_passive_rom_l_hip]	Left Hip Flexion: Limitation Passive ROM	checkbox, Required 1 fi3_passive_rom_l_hip__1
61	[fi3_alt_position_l_hip]	Left Hip Flexion: Used Alternate test position	checkbox, Required 1 fi3_alt_position_l_hip__1
62	[fi3_fatigue_l_hip]	Left Hip Flexion: Subject Fatigued with testing	checkbox, Required 1 fi3_fatigue_l_hip__1
63	[fi3_poor_effort_l_hip]	Left Hip Flexion: Poor effort	checkbox, Required 1 fi3_poor_effort_l_hip__1
64	[fi3_other_l_hip]	Left Hip Flexion: Other	checkbox, Required 1 fi3_other_l_hip__1
65	[fi3_hip_flex_l_spfy] Show the field ONLY if: [fi3_other_l_hip(1)] = '1'	Specify other:	notes, Required
66	[fi3_observer_inst_des_text]	Short Manual Instruction to Patient: Perform as many repetitions of each muscle group task as you can or stop	descriptive

			when reaching maximal number of repetitions. However, you decide when to stop due to muscle fatigue, pain, or general fatigue. Instructions to Observer: Numbers of correct performed repetitions following five learning repetitions are registered for each task. If passive ROM is normal, but active ROM is limited the score is 0. Do not perform the task. If passive ROM equals active ROM perform the task within actual ROM. Each task is stopped if: a) the patient cannot keep up the given pace and is unable to correct within three repetitions, b) the patient starts to compensate and is unable to correct within three repetitions. After completing each task, the patient is instructed to rate perceived muscular exertion on the Borg CR-10 scale from 0-10 (0=no exertion, 10=maximal exertion). A metronome is used to standardize the movement pace of each task. A pace of 40 beats / minute results in 20 repetitions per Minute. The test should be scored using the dominant side. However, if the dominant side has a limitation, the other side should be used in the scoring. If one muscle group is omitted in the testing, please use the second scoring method, which is based on the percentage of maximal repetitions. More instructions can be found on the IMACS website under "Other Tools": Additional Instructions						
67	[functional_index_3-fi_3_complete]	Section Header: <i>Form Status</i> Complete?	dropdown <table><tr><td>0</td><td>Incomplete</td></tr><tr><td>1</td><td>Unverified</td></tr><tr><td>2</td><td>Complete</td></tr></table>	0	Incomplete	1	Unverified	2	Complete
0	Incomplete								
1	Unverified								
2	Complete								